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An analysis, design, implementation of the administrative and personnel functional areas of ARGOS

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An Analysis, Design, Implementation of the Administrative and Personnel Functional Areas of ARGOS

by

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ARGOS is a prototype multi-media database system developed by CDR B. B. Giannotti and Lt Kevin F. Duffy at Naval Postgraduate School for their master's thesis. They describe how ARGOS can be used by the Battle Group Commander and shipboard personnel as an efficient and dynamic management and decision support tool. Their system was developed as a direct outgrowth of the "paperless ship" philosophy expressed by VADM Metcalf and has had many supporters in DOD. This thesis furthered their research by analyzing, designing the administrative and personnel functional areas of ARGOS. The functions and processes identified were then partially implemented. ARGOS as a prototype system provides an effective and rapid method for developing and evaluating management tools and decision aids. This implementation demonstrates both the capabilities and benefits such a system would have for the Navy.

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An Analysis, Design, Implementation of the Administrative and Personnel Functional Areas of ARGOS

by

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Submitted in partial fulfillment of the requirements for
the degree of

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ABSTRACT

ARGOS is a prototype multi-media database system developed by CDR B. B. Giannotti and Lt Kevin F. Duffy at Naval Postgraduate School for their master's thesis. They describe how ARGOS can be used by the Battle Group Commander and shipboard personnel as an efficient and dynamic management and decision support tool. Their system was developed as a direct outgrowth of the "paperless ship" philosophy expressed by VADM Metcalf and has had many supporters in DOD. This thesis furthered their research by analyzing, designing the administrative and personnel functional areas of ARGOS. The functions and processes identified were then partially implemented. ARGOS as a prototype system provides an effective and rapid method for developing and evaluating management tools and decision aids. This implementation demonstrates both the capabilities and benefits such a system would have for the Navy.

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I. INTRODUCTION

Corporations spend an inordinate amount of time and resources on the administrative and operational management of their personnel. In fact, personnel costs are a major portion of any business's budget. This area, however, is underutilized for ways of cutting costs and expediting the administrative processes. The administrative burden placed on a manager is a significant factor in both managerial turnover and morale. The corporation, in recent history, has taken the attitude that since managing people is the manager's job, all the related paperwork and time he or she may spend doing these tasks is inherent to the job. If corporations found their managers were spending a great deal of their time and effort dealing with routine operations, they would immediately identify these areas and alternative methods would be proposed. These methods might prove to have substantial benefits related to time savings, cost reductions, managerial turnover and an increase in managerial morale which would significantly improve any one manager's productivity.

This cost and time savings is no more apparent in the United States Navy. Naval officers are expected to be current on the latest threats, technologies and trends in naval warfare and ready to implement them at any given instant. Naval officers are also expected to keep their cognizant equipment and personnel at the highest state of readiness. There is of course the myriad of reports and administrative tasks that must also be accomplished. All these duties are placed into the officer's day to be completed. The pressures of time constraints and short term requirements often has a

naval officer sacrificing his professional development. This tactic satisfies all the high visibility requirements of the officer but strategic significance in times of hostile actions could be disastrous. Therefore, methods to relieve the officer of some of his administrative burdens or at least expedite them would directly relate to a time savings and possibly increase the Navy's readiness.

One obvious way to reduce this administrative burden is to develop an information system that can automate most of the routine reports, administrative decisions and personnel planning an officer must deal with on a day to day basis. Information systems are being prototyped by many vendors that usually focus on one aspect of daily operations such as maintenance, supply, word processing and database management. A system that could combine a multitude of these operations into one cohesive multi-media system would certainly reap a variety of benefits to the officer, the ship and the Navy as a whole.

ARGOS is such a prototype multi-media database system. It was developed by CDR B. B. Giannotti and Lt Kevin F. Duffy at Naval Postgraduate School for their master's thesis [Ref 1]. They describe how ARGOS can be used by the Battle Group Commander and shipboard personnel as an efficient and dynamic management and decision support tool. Their system was developed as a direct outgrowth of the "paperless ship" philosophy expressed by VADM Metcalf and has had many supporters in DoD. ARGOS, if fully developed, would bring information processing, distribution, storage and decision support into the 1980's and allow for growth and expansion into the future [Ref 2] ·

In their conclusions of their thesis, CDR B. B. Giannotti and Lt Kevin F. Duffy suggest that for follow up thesis, an officer should fully develop one or more of the

modules they identified [Ref1]. This thesis addresses the analysis, design and implementation of the administrative and personnel functional areas of ARGOS.

These areas lend themselves to development in an information system since most work in these areas aboard ship is routine and the information is already stored in simple paper file systems. Generally, an officer must spend a good percentage of his day trying to gather all the pertinent data necessary in order to do some of his most basic work such as scheduling, writing reports and updating personnel data. One slight change in anything related to his task and he must start the process over. Therefore, ARGOS would expedite the gathering process, handle the manipulation of all the factors and possibly suggest alternatives to the decisions he must make on a daily basis, thus improving his efficiency tremendously. This would allow the officer to concentrate on more strategic issues or requirements that can not be handled by ARGOS or require human intervention. ARGOS would enable his superiors to peruse his work more readily and offer comments or changes without the officer having to manually locate everyone concerned. Any officer would welcome the savings both in time and frustration in the process of running correspondence through the chain of command.

Since ARGOS is being implemented on Macintosh systems, it was developed in the Hypercard environment. This environment, as discussed in CDR Giannotti and LT Duffy's thesis, is very powerful [Ref 1]. A developer has at his hands a myriad of tools to rapidly create screens, graphics and menus. Hypertalk, the language that is employed in Hypercard, is very easy to learn and a novice programmer can create rather difficult functions in a short time. Hypercard can be described as a multi-media database program that uses a object-oriented approach towards data and functions. Using this technology and software, a developer programs in a script type format,

that is structured and written in an English syntax language. Therefore, a developer may conceive separate scripts to implement his dialogue scheme, based on a level of access, he may in turn link these schemes to the appropriate information and presentation formats for that level. One of the best reasons for developing a system such as ARGOS in this environment is the modularity in which a program can be developed. Several persons can be working on separate areas of the project and need only to know the information that needs to passed external to the module. Each module can be developed as a separate entity and fitted into the system when it is ready. This language and environment opens the possibility for end-user computing; the language is easy to learn and each end-user's module can be added in as a module and deleted when no longer required. The way the Macintosh interfaces with the user is also an important aspect from the human interface perspective. In Hypercard one can create pull-down menus, buttons for use with a mouse and text fields entered via the keyboard. All these options allow the developer to both direct and navigate a user and still offer the user much flexibility and ease in the way he or she might execute the program.

This thesis is organized as follows: Chapter II defines the current problem the officer has in his administrative tasks and the environment in which he must work. Chapter III analyzes this situation using the Representations, Operations, Memory aids and Control (R.O.M.C.) approach to developing a Decision Support System (DSS). Chapter IV discusses the design of the personnel and administrative modules. Chapter V describes the implementation of the modules in ARGOS and provides a user's guide for the system. Chapter VI contains conclusions of the thesis and recommendations for follow-on thesis work. A complete listing of all code is

presented in the appendices; screens and graphics used in these modules are presented as figures within the text.

II. THE PROBLEM STATEMENT

With the progression of the modern Navy, a division officer has become more and more inundated with paperwork requirements. As this paperwork increases, a division officer spends most of his time trying to locate, gather, record, verify and receive approval for the paperwork. Little time remains for his primary duty of actively managing his division and furthering his professional development. This problem has been on a steady increase with no significant relief in sight.

One of the reasons the paperwork is rising at such a high rate is the increasing responsibility at the divisional level. Decisions are being made that affect all levels above and below him. A division officer must keep records, generate reports and make decisions based on a multitude of factors and requirements that are not under his direct control. Each of these decisions is based on one or more relevant facts discerned from the paperwork he or his shipmates has generated. Each of these decisions creates even more paperwork that verifies or approves the original decision or alternative to the problem at hand. As one can see the paperwork continually regenerates itself resulting in an unacceptable ratio of "paper pushing" to actual decisions being made. Additionally, time spent handling the paper is time taken away from the decision making process; in other words, division officers are often making decisions based on partial information. This reduces the effectiveness and efficiency of the division officer's decision making process.

The decisions being made are usually of a routine nature ranging from those at an individual level to ones encompassing a ship wide schedule. A division officer must

make decisions on his personnel's leave, schooling, watchstanding and professional development. On the surface, these seem only to affect his level but could, in fact, have far reaching consequences. For example, a simple decision as to whether to allow a sailor to take leave seems straight forward; however, this could affect many important aspects of the ship and operational decisions. Before making such a decision a division officer must investigate necessary needs to check manning requirements, current leave status, watchbills, duty assignments, legal status (e.g., is he restricted to the ship), scheduled schooling and training and others. What once appeared as a simple decision instead could have possibly affected a wide range of areas. If a wrong decision is made it could adversely reduce the ship's and his divisional readiness. The ship may not be able to meets it's operational commitments which would be an extreme embarrassment and would certainly have negative impacts on the division officer's career.

Continuing with this example on a person's leave, the decisions appear to be well structured. It should be a matter of ascertaining the ship's requirements and comparing them to what each individual's request for leave is, however, this is not the case. If there is a requirement to have a certain number of qualified sonar operators on board for any normal underway operations and if this underway period has nothing to do with sonar operations then this requirement is much more flexible for this particular instance. Sonar operators would not be critical to the ship's mission. Allowing the sailor his leave may be a possibility despite the initial requirement. Therefore having a system that would allow for these contingencies and/or offer alternatives for these semi-structured complex decisions would be most beneficial. On a timely and recurring basis a division officer could explore all aspects

of any leave decision he might have to make, and the chance for a critical error occurring is greatly reduced.

The support for these "routine" decisions and paperwork has been overlooked long enough. A typical division officer could spend up to 75% of his day dealing with these decisions and the related paperwork, this is time that could be better spent on his own personal training or that of his division. Not only must the division officer gather the necessary data for making the decision but once he has made it he must get it approved through the chain of command which often times means running throughout the ship looking for his department head and others to get their approval. This usually leads to the paperwork being put in someone's "IN" basket where often it is forgotten about or delayed. There is an opportunity for not only saving time but providing for a more effective decision making process and it's related support.

Another problem facing a division officer is the multitude of files he must keep accurate and current. However, some of these files are related to each other in many different ways, thus an addition to one file may require updated or at least checking several others. This process of file management usually reverts to the officer spending one whole day sifting through his files and reports updating and cross-checking as appropriate. ARGOS could eliminate these file management problems and additionally offer the officer consequences or ad hoc queries on what effects certain changes in the files may make to his position or readiness.

The contribution of this proposed system to shipboard decision making and management is manyfold. The most apparent benefits are higher quality and timely decisions being made. Additionally a division officer will have the opportunity to choose from a myriad of alternatives based on his specific inputs and also those variables stored in the database that he may have otherwise overlooked. The system

will inevitably improve communication between himself and his superiors and subordinates by facilitating the recording, distribution and feedback of pertinent decisions and reports. All these factors contribute to a division officer who will be more effective, efficient and productive throughout his work day. A major benefit of automating these processes and reports is the elimination of tons of paper from the ship; everyone would not have to keep a personal "hard copy" of all correspondence, they could all share a common database from which to draw their information.

The manner in which we would go about constructing an information system for this area is to first develop specific goals that the system would try to achieve. Based on these goals we could determine the characteristics of the personnel and administrative modules and also the appropriate levels of computer technology needed. Having these characteristics identified, the modules could be developed to support each area of decision making using a specific set of models and presentation techniques. ARGOS overall would take on the image of being a file/data management system that would verify all the officer's inputs and display for him possible ramifications of such inputs or decisions. Additionally, the system could expand on this by providing an officer with alternatives, reports and statistics that would aid him in any decisions to be made. Underlying all of this would be an infrastructure of a rudimentary expert system/rule based menu driven dialog that would guide the officer through the correct levels pertaining to his area of interest. This infrastructure would also alert him to any inappropriate inputs and/or nonsensical decisions.

With the existing technology of today and the readily available data; relief for the overburdened officer is not only feasible but necessary. The technology of a multi-media database is present today at a reasonable cost that would not make the project cost prohibitive. In fact, the Navy has already planned a replacement version of the

SNAP II project (a system that automates the supply and some administrative functions); this project has been continually criticized for cost overruns and not meeting design or user specifications. A system could be rapidly developed using multi-media database technology and rapid prototyping that would not only enhance SNAP II's shortcomings but go far beyond the expectations of it's follow-up versions. Such a system is ARGOS, thus a commitment of resources towards our proposed system would meet all user and fleet specifications and could be developed for far less.

The evaluation of ARGOS should be conducted at two different levels. The first level evaluates it as a strictly management information system using traditional methods. Since the system would be used in a file/database management role a basic cost-benefit analysis could be used to determine its efficiency and effectiveness. Also at this level an evaluation would include analyzing inputs, outputs, data retrieval, concurrency, etc., against user and designer specifications.

On a second level the proposed system should be evaluated on its decision support functions and capabilities. This evaluation would be of a value analysis orientation. The evaluation team would need to determine first a list of benefits the system would have to demonstrate successfully in order for the project to be considered acceptable. Secondly the team would need to establish a cost threshold that the system could be evaluated against in order to determine if its worth the benefits derived. The system could then be prototyped and actual benefits and costs assessed within this framework. Therefore ARGOS should be evaluated using this two level approach in order to properly take into account all benefits and costs.

As discussed earlier ARGOS is a multi-media database and decision support system resulting from rapid prototyping, thus additional demands by the users for

more DSS nuances can be easily incorporated in follow-on versions. This type of natural evolution of ARGOS fully demonstrates the flexibility and adaptability that an effective information system should possess.

III. ANALYSIS OF THE ADMINISTRATIVE AND PERSONNEL MODULES

The decisions being made by officers are being based on a variety of information sources both internal and external to the shipboard environment. Some of the internal sources include personnel records, daily routines and ship's instructions and policies. The external sources vary from the ship's operating schedule to the CNO policies and directives. Both internal and external policies can be general guidelines in nature to interpreted as needed or direct commands from the CO. This decision environment stresses the need for a flexible and adaptable information system. In analyzing this decision situation, I have tried to both describe what is currently present in the decision making process and also offer what a DSS might try to accomplish.

The analysis of the decision process was structured around the R.O.M.C. approach. This approach allows the developer to identify specific capabilities that will be required in the DSS. The approach uses four categories or components to describe the current situation and possible improvements: Representations, Operations, Memory aids and Control. By describing each of these categories in terms of the current decision process a developer can, in a structured manner, ascertain what processes the decision employs. Each category is then analyzed to see if any of these processes can be provided by a DSS more efficiently and effectively. The R.O.M.C. approach is summarized in Table 1 and discussed in further detail below.[Ref 3]

Table 1

R.O.M.C. OVERVIEW

Decision Makers Use	DSS Provides
1. Representations -personnel records, operational schedules -personal correspondence -relationship between correspondence and changes in personnel records -relationship between schedules and personnel assignments -generic tables and charts	1. Representations -online personnel records -automatic schedule creation -alerts to mandatory changes in personnel records -warnings of personnel and schedule conflicts -graphs on manpower status -charts of personnel assignments
2. Decision Making Processes	2. Operations
- Intelligence --gather data on personnel and ship's schedule --gather data on appropriate instructions or procedures --verify data for currency and applicability	- Intelligence --query ship and personnel's database --query instructions and manuals for procedures --verify data and instructions
- Design --gather additional information --create a course of action --develop alternatives	- Design --query other databases --form a path to proper course of action --list alternatives
- Choice --rank alternatives --compare alternatives	- Choice --develop statistics or logic for a course of action --provide basis for best alternative

Table 1 (con't)

Decision Makers Use	DSS Provides
3. Variety of Memory Aids -lists of personnel -summary charts of ship's schedule -tables showing personnel assignments and status -file drawers of old tables -scratch paper -memo reminders -personal contact reminders	3. Automated Memory Aids -extracted data on personnel, schedules and events -views on personnel or ship's status -workspace for developing schedules and correspondence -library for saving assignments and schedules -DSS messages -temporary storage
4. A Variety of styles, skills and knowledge applied via direct personal control -published regulations and standard operating procedures -direct orders -informal personal controls of procedures	4. Aids to direct personal control -DSS formed regulation control of user -DSS explains when their is a departure from standard operating procedure -override DSS defaults or procedures -voice and menu prompts of correct choice or error

The R.O.M.C. approach can be used to describe the current decision process for the afloat officer in his personnel and administrative functions. In using this approach I am drawing from my own experiences, observations and recent interviews. The representations or conceptualizations for this decision process are currently on a basic manual level. Some of these representations are standard forms (e.g., personnel records) and reports (e.g., message traffic and correspondence) generated by all officers at every command level. Representations might also include tables and charts that are generically produced by the government and distributed to all commands. A major constraint is that the officer must tailor the table and charts to fit his specific needs or report requirements. Also, these representations are usually comprised of old and processed data, therefore the immediate significance of knowing this data is lost. There is the need to fully understand the relationships between each of these representations and how they affect each other to correctly use them.

In the operations portion of this methodology we must divide the operations into the three categories of decision making: intelligence, design and choice. Within the intelligence mode the officer must glean information from personnel records, instructions and various manuals while ensuring its validity. This is not an easy task and usually this is where erroneous data enters the decision process. Additionally, all this information is stored in various areas of the ship and must be acquired manually; a time consuming effort to say the least. The design mode of the decision process not only includes the gathering of additional information such as the current status of an individual but the formulation of a proper course of action and its alternatives, if any. In the choice mode we have a course of action and its alternatives, we must now rank or somehow discern which action is the best for the decision situation. In reality the

officer is usually forced to take the first action or decision since time and his ability to generate rankings of decisions is limited. The time an officer has to spend on a particular decision is usually exhausted by the end of the first two modes. Any statistics or priority schemes would have to be manually generated and are therefore infeasible. Thus one can see automation of the operations portion of the decision process by itself would reap a multitude of benefits.

In the current system memory aids are limited to manual and hard copy methods. The officer must rely on pencil and paper type scratch pads, calendar schedulers tables and other personnel reminding him of important events. The most sophisticated memory aid he has access to is a paper file cabinet. On some of the newer ships he may be lucky enough to have access to a stand alone word processor. To discover any errors or faulty decisions he must rely on personal experience or superiors. This screening process catches the major mistakes, however, small errors may slip through which may have adverse consequences. Like other areas memory aids are quite lacking in efficiency and effectiveness since they are relegated to manual processes.

The control area of the R.O.M.C. approach is very limited in the current situation. The controls of the situation are navy regulations in huge volumes and standard operating procedures that are in place on a ship. These are very passive control procedures and a officer may not have the time or desire to look up each appropriate regulation or procedure. Personal contact controls, that is direct orders or a superior advising a officer of an error, is the most effective means currently for providing some control. As with previous areas most processes are manual and require much time and effort that could be done more efficiently by an automated means. Control

mechanisms will be extremely useful in guiding the officer through unknown procedures or detailed reports.

The opportunity to expand and automate on the current situation is necessary and apparent on even a high level analysis. ARGOS would have two major roles to play in the afloat environment. The first major role would be the personnel functional area. In this area we will concentrate on the functions of individual, workcenter, divisional, departmental and ship wide personnel services. Examples of this might include advancement potential, Personnel Qualification Standards (PQS) readiness, evaluations, leave status and emergency/dependency information. The administrative functional area is the second major role of ARGOS. Its functions will also span the multi-level hierarchy of an afloat command. Some of these functions will include berthing and watchbills, legal matters, inspections, division officer notebooks and internal and external routine correspondence. Each of these roles shares an equal priority in the afloat environment.

ARGOS will have an impact on the efficiency and effectiveness of all officers. A few areas where ARGOS can be quantitatively measured are time savings, reduced generation and storage of paperwork, and better managed personnel resulting in less wasted work. Qualitative measures would include more accurate reports as well as the generation of alternatives to decisions that will lead to better quality decisions. Also a reduction of stress due to frustration should be taken into account when evaluating ARGOS. The contributions of ARGOS will become more apparent as our system evolves with the user's inputs and follow-on versions. As was stated earlier, ARGOS since it is being developed in a modular fashion can easily incorporate changes and advancements both in technology and user requirements.

IV. DESIGN OF THE ADMINISTRATIVE AND PERSONNEL MODULES

The design of the two functional modules was not pure since I had knowledge of the implementation environment. However, I believe that this did not restrict the design of the system. Actually this implementation detail helped in uncovering new or more explicit ways to display information in the Hypercard environment that may have otherwise been overlooked. Therefore, the following design of the modules was conducted using a theoretical approach but with knowledge of the implementation environment.

As discussed in the last chapter, the R.O.M.C. approach (summarized in Table 1) can be used to provide a framework for the design of ARGOS. The representations of ARGOS will include all those of the existing system (e.g., personnel records and message traffic), however, they will be generated, stored and displayed in a database environment. Thus giving the officer the ability to instantly cross-reference and look up a myriad of instructions, policies and records. ARGOS will be able to generate schedules, charts and graphs that summarize data for easier understanding. Warnings or error messages will be displayed if a user makes an incorrect or invalid choice. The familiar look that the representations will have will allow for easier training and the ability for the officer to custom design his own representations in the future. Also, the Hypercard environment in which we are implementing ARGOS, allows for numerous fonts, page setups and report generation techniques that will allow the

The operations portion can again be broken into the three categories. The intelligence category will again gather the necessary information from the various sources previously described, however, this gathering, sorting and verification processes will be entirely automated and transparent to the officer. This will save enormous amounts of time and energy on the officer's part. He will no longer have to verify personally all the information needed for a particular decision or problem; the system will automatically retrieve the most current information and determine whether the information is in the proper format and within certain parameters. The information gathered will be of a higher quality because of this real time retrieval process. The design mode of our operations will be designed to gather the most current data and any additional data that has relevance. Naturally, the manipulation of the most current data should provide the officer with the best alternatives. The choice mode will also make the officer's task easier by providing alternatives and also some ranking scheme that will give the officer some idea of a confidence level of each alternative. Possibly printing out the logic or procedures accessed to form that decision. The decision process will certainly be expedited and also the officer will have some solid basis for his decision. The officer's choice will be enhanced by the availability of ad hoc queries that can possibly be performed in our environment.

The biggest advantage of our system is in the area of memory aids. The officer will no longer have to carry around an assortment of scratchpads and calendars that he must personally update; the system will be constantly updating these functions so the officer can see a current view at any time. The information, since it will reside in a database, will be readily available to the officer thus, relieving him of having to search for it. Furthermore, the system will be checking his courses of action for any faulty logic or major errors, this will take some of the burden off his superiors in

checking his work. This knowledge base will continue to expand and be modified so that the learning curve for the officer's replacement will be minimized.

Control mechanisms that do not exist in the current decision situation will play a major part in ARGOS. Mechanisms that we will be used consist of keyboards, mouse, and monitors for the hardware aspects. In the software environment pull-down menus, query-response interface, and report form generation that will control field access will be used to both control and guide the officer through the system. These controls will certainly improve the efficiency of the officer's work by not allowing him or her to wander off the direct course of action unless it is permitted by the circumstances. The controls will also help develop junior officers and other administrative personnel's skills and knowledge in these areas by teaching the process that must be gone through in order to reach a specific result or complete a required report.

The following functional description of ARGOS will consist of the dialogue structure, data models and model representations and their manipulation capabilities. The dialogue structure will contain both simple synthesized voice and menu prompts that will guide the officer through the series of menus. These menus may activate a variety of specific actions or lead into other decision areas. Along with menus, Hypercard allows for the use of buttons that when activated can perform a multitude of operations hidden from the officer and bring him to a specific area of the system. Most input and output of information will be in a generated form format to allow for familiarity and ease of insertion. The data will be represented as a collection of stacks that contain individual object-oriented cards. In our environment each stack or individual cards can be linked or referenced from any other stack or card in both a homogeneous or heterogeneous manner. This allows for a significant increase in

flexibility and adaptation. The modeling components since they will be working with this type of data structure can be optimized in sorting and manipulation algorithms. The models will be able to search, extract and display data using a rule base for the optimum decision and alternatives for a certain situation. Through the use of Hypercard as a multi-media database and the ease with which it interfaces with the components of ARGOS described above, ensures that the system can be implemented for the most efficient use by the officer.

The design of these functional modules and the way in which one will navigate through the system has been done from the officer's standpoint. The information is displayed and stored in a format that is conducive and easy for anyone to understand with the minimum of training. The problem of actually printing out the information on standard navy forms or reports can be handled by a printer interface program. The opposite problem of importing data off these standard forms can also be handled by a scanning program that will extract the necessary data off the forms and create the appropriate cards and stacks within the system. These problems are significant but are beyond the scope of this thesis to develop the actual programs. Follow-on thesis students will be working on this interface problem.

V. IMPLEMENTATION OF THE ADMINISTRATIVE AND PERSONNEL MODULES

ARGOS had already identified six main modules of which administration and personnel were two. Entering ARGOS in the same manner as described by CDR Giannotti and LT Duffy, one would navigate to the six functional areas card in order to enter the administrative and personnel modules (Figure 1). At this point one could choose to enter the administration or personnel module by clicking on the appropriate button icon. From this point ARGOS takes you into separate stacks to accomplish your work. In explaining the implementation of the following modules, I am assuming the reader has some general knowledge of Hypercard and it's environment of stacks, cards, buttons and fields. If further explanation is needed CDR Giannotti and LT Duffy describe in full detail this environment [Ref. 1].

Note that in Hypercard, every card, stack or any departure point can be password protected. Thus the problem of safeguarding any personal or sensitive information can be eliminated. ARGOS, by remembering where you entered a particular area, will only allow you certain options or access to certain data. This enables all the personal data to be stored in one coherent database stack and each application can extract, update or review data based on the appropriate password level.

In implementing the administrative and personnel modules, I had to take into account the development of ARGOS to that point. In order to give ARGOS a consistent "look", I designed the basic card and background buttons in much the same way as the previous developers. The buttons that were the same as other

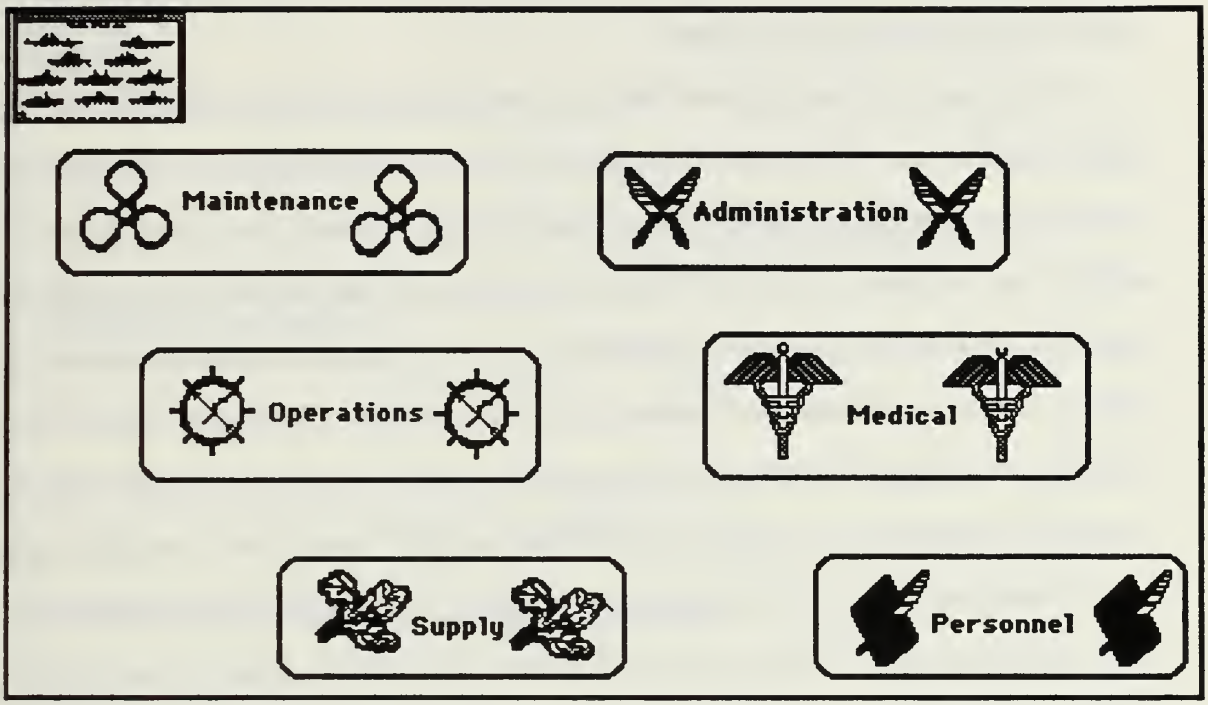

Figure 1 "Functional Areas"

modules, perform the same function in my modules, so as not to add any confusion for the user. The modules or functions that are fully implemented as of this thesis have figures associated with them. The others are discussed for both completeness and for implementation in the future.

By choosing the administration button a card will be displayed offering the user four subject areas: Forms, Divo Notebook, XO and Legal (Figure 2). This list is not an exclusive one but yet major areas of interest that I found in my interviews with officers and enlisted personnel. These areas were selected for two reasons; first by personal and other's experience, these areas were time intensive and thus offered the most potential for increased efficiency and effectiveness. Secondly, I chose them because to date there has been no system that has tried to model these areas and yet if correctly modeled much confusion and frustration could be avoided. Once these areas were developed, adding or deleting functions based on changing requirements would be relatively simple. Also, the modularity Hypercard offers allows the developer to add and delete without effecting the existing modules or functions.

The first area identified was Forms. The user by clicking the mouse on the Forms icon initiated the pop-up menu behind it and thus displaying several options open to him. Forms, in it's current state, offers the user a short selection of forms: request chits, check-in, check-out, standard reports and a miscellaneous area for adding others in the future. Request chit option will allow the user to fill out this form but only information not known by ARGOS is requested. Once ARGOS knows the user social security number it can extract and fill the personal and ship information for the user. This will inherently speed up the filling out of these day to day chits. These chits can then be put in the user's outbox and ARGOS will ask whose inbox to put it in and offer the most likely default option. This operation of extracting data that is

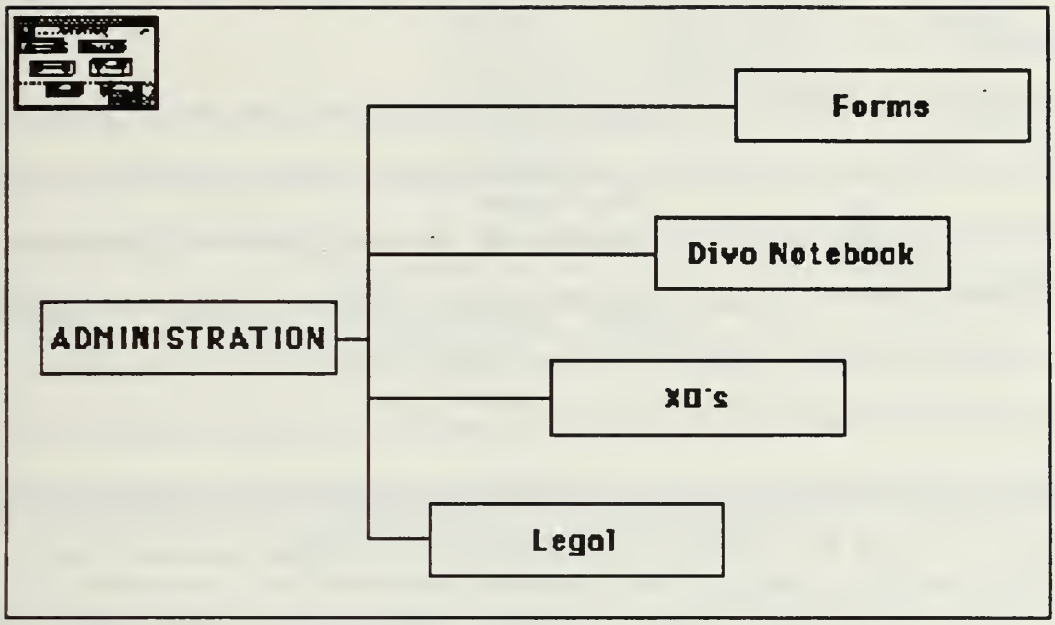

Figure 2 "Administration"

known and then being able to forward or save it will be universal throughout both modules. Therefore, if not explicitly stated that the user can not perform these operations with any certain correspondence, chit or report it can be assumed it is available.

The check-in and check-out procedures work together in the area of processing people on or off board. The check-in procedure currently creates a linked list of cards that will serve as the individuals record; only the most important information is currently stored due to storage limitations currently (Figure 3). However, ARGOS will ultimately be able to handle all service record information when storage devices such as CD/ROM become more prevalent for use. The information that is stored can be gleaned via a scanner eventually and put in the appropriate card fields for the individual. As of this thesis the information needs to be manually entered. The check-out procedure requests the departing individuals social security number and deletes the appropriate person's information from the enlisted stack and stores it on a backup stack. This backup stack can be used to recover mistakenly deleted data or cleared at certain intervals of people gone for more than three years. After the person is added or deleted, ARGOS will add the necessary information to the Diary report message that can be printed out at regular intervals for transmission by radio central.

Choosing the Reports or Misc option will allow the user to format specific routine reports or lists that may be necessary to generate. These options will give the user flexibility in designing and tailoring reports to the officer's command or requirements. Once set up the format may be save for future use by the officer.

The second area is Divo Notebook, where the officer can develop an on-line division officer's notebook for his or her division. The information that is stored when a person checks-in is all the information currently necessary to fill out a

	Name:		
	SSN:	Rate:	PRD:
	Paygrade:	Birthdate:	Age:
	Division:	Work Center:	USN USNR
	Duty Section:	Bunk Number:	NEC:
	Security Clearance: Based on: Access Granted: Date: Access Removed: Date:		

PQS					General Quarters Station:
Watch	Date Comm	Est Compl Date	%Prog	Date Qual	
					Underway Station:

Figure 3.1 "Enlisted Record Page 1"

Date Reported:	Date of First Enlistment:	Rate Desired:
Date of Present Rate:	Eligible Next Rate:	Religion:
Permanent Home Address:		
Phone #	Marital Status:	# of Dependents:
Local Address:		
Phone #	Name of Wife:	
Children	Next of Kin	
Name Age	Name:	Relation:
	Address:	
	Phone #	

Previous Duty				Leave Record			
Date Reported	Unit	Division	Duty	From	To	Type	#Days Bal

Figure 3.2 "Enlisted Record Page 2"

Semi-Annual Marks					
Period Ending	Professional Performance	Military Behavior	Leadership and Supervisory Ability	Military Bearing	Adaptability

Naval Education and Advancement Record				Practical Factors	
Item	Title	Date Completed	Mark	Rate	Date Completed
Service School					
Military Correspondence Courses				Formal Education	
				High School 9 10 11 12	
				College 1 2 3 4	
Others				Major Subjects	

Figure 3.3 "Enlisted Record Page 3"

Basic Battery Scores								First Aid	Truck Driver	Fire Fight'g	Tel Talker	Bus Driver
GCT	ARI	MECH	CLER	ETST	SONAR	RADIO	FLAT					
								Cox'sn	Swim	Driver	Boat Eng	

GED				
High School	Part I Score	Part II Score	Part III Score	Part IV Score	Part V Score
College					

Service-Wide Rating Examinations	Date	Rate	Results

Awards and Commendations

Disciplinary Record

Figure 3.4 "Enlisted Record Page 4"

division officer's notebook card, thus under the individual option the officer can update any of the areas that he has authority to do so. The other information will automatically be updated when the person's record is modified by any designated personnel. In other words, when ship's office makes a change to the information, since it is all on a database, the officer's notebook card will also be updated. The Planning Of Action and Milestones (POAM) option will allow the user to develop a schedule or calendar for the individual to complete required training or watchstations. The Misc option was put in to allow for future additions to this area.

The XO area will, of course, be password protected for the executive officer to develop the options listed: inspections, POAM, berthing , LOng Range Training And Readiness Plan (LORTARP), tickler and a misc option for additional items. The inspections option will allow the XO to generate a command inspection bill and assignments for the inspection. Also under this option the executive officer may create a listing of passed inspections so that he or she can identify problems that have not been resolved since the last inspection. ARGOS will automatically correlate the problem with a specific workcenter and responsible personnel. Other routine inspections can be built similarly such as messing and berthing. Separate inspection bills and assignments of cognizant personnel can also be generated by choosing the New option while in the inspection mode.

The POAM option allows the XO to build a POAM for any set of upcoming inspections or major events. This tool will allow him or her to set start dates and completion dates and will automatically generate percentages completed for any specific task. The cognizant department head may enter the module and update the information on where his department stands on a particular milestone or objective. ARGOS will also warn him if their are any milestones that conflict with one another

by displaying a message and letting the XO decide if their is truly a conflict or if the events are exclusive.

The Berthing option allows the executive officer and the Master at Arms to maintain an up to date status on where the ship stands on empty racks. It will display where there are racks available in Officer's country, CPO mess or enlisted berthing and also list racks that are currently available because people are on leave or temporarily off the ship. ARGOS will also allow the executive officer to move people around to find the best sleeping arrangement for the situation at hand. This will radically reduce the time and effort involved when an inspection team comes aboard in finding them places to stay.

One of the problems an executive officer has is maintaining an overall handle on his officer status and requirements. The LORTARP option gives the executive officer the ability to enter the ship's officer requirements both by necessary schools and numbers and also enter any expected arrivals of officers. ARGOS will then generate a schedule of current officer strength and when officers are due to leave and also identify any shortfalls in the ship's requirements, so that the XO may be more aware of any upcoming problems with officer strength. This will give the XO early enough warning to talk to the ship's placement officer about sending an incoming officer to schools or sending an officer already aboard ship to fill the requirement.

In order to allow the executive officer more time for his other duties the tickler option was implemented to keep track of daily problems that needed attention or of items that needed completion. The XO enters any item that needs correction with a cognizant officer and a expected completion date; ARGOS will then upon the XO entering this option immediately display any overdue items and a complete list can also be generated. The cognizant officer will also be able to review these items and

update them with additional comments. This will be done under the officer's personnel module, ARGOS will automatically update the officer's tickler file under this module and the officer may make comments about any item or update a status and this will be reflected in the XO's tickler. The Misc option was again put in to allow for future additions to this area.

The final area of interest is the Legal area which on many ship's could be a full time billet but is usually a collateral duty of an officer. This area will hopefully provide a structured decision matrix that will allow a legal officer to query ARGOS about a person's legal standing. This area will let the executive officer, legal officer or the Master at Arms to generate report chits follow them through a non judicial punishment and then propose any further action that may be necessary or optional. Any of the forms listed in this area need only the person's social security number and the article of the Uniform Code of Military Justice to bring up the form filled out with generic paragraph of that article displayed. ARGOS can also determine if an individual is dischargeable under any MILitary PERSonnel MANual (MILPERSMAN) article using the Administrative Board procedures. If the offense is serious enough ARGOS will tell the officer that the person must be formally charged and a courts-martial must be convened for adjudication. ARGOS will then let the commanding officer decide which type of courts-martial to convene if there is flexibility for the specific charge. The schedule option allows the legal officer to keep a calendar of events in legal matters so that he can be assured to have the required documentation completed on time or the accused personnel at required hearings or courts.

These are the major areas that were identified during research aboard ships and interviewing appropriate personnel. There are, of course, many other Administrative

procedures that can be added to ARGOS with future developments. In Chapter VI, I identify some of these areas as possible follow on research topics or development areas.

The Personnel module was developed in a straight forward fashion, in that for the most part there is a hierarchy of options and detail (Figure 4). I identified three major levels of implementation: workcenter, divisional and departmental. Each level builds on the the previous level by including a wider personnel base. Therefore all options will be described under the workcenter level, however, keeping in mind that the higher levels have the same functionality the only difference being they draw on a larger personnel base. This allows each officer to only have access to his cognizant personnel and options.

The officer enters the module by selecting the Personnel button and the card listing all departments, divisions and workcenters will be displayed. The officer then clicks the mouse on the appropriate department and drags the cursor to the workcenter level. There is a roll off menu identified by the triangle and you can select any workcenter option. Once this is done, ARGOS takes you to the workcenter card you chose. This card displays the workcenter name and operations that can be performed (Figure 5). The major operations in this area are shown as a group of buttons: evaluations, watchbills, training, advancement, directory, leave, emergency data, tickler and reports. I will briefly discuss each button and it's options, however, for the most part the button's functionality is intuitive and all buttons extract and display information in the same manner as the administration module ie., the user need only enter the individuals social security number for ARGOS to take over and complete most of the work.

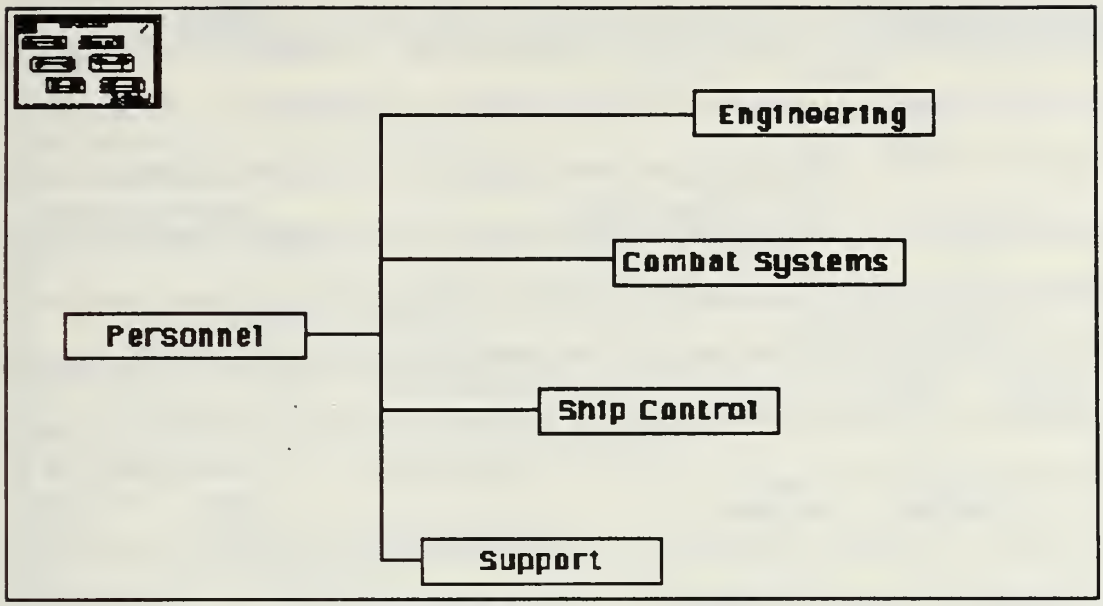

Figure 4 "Personnel"

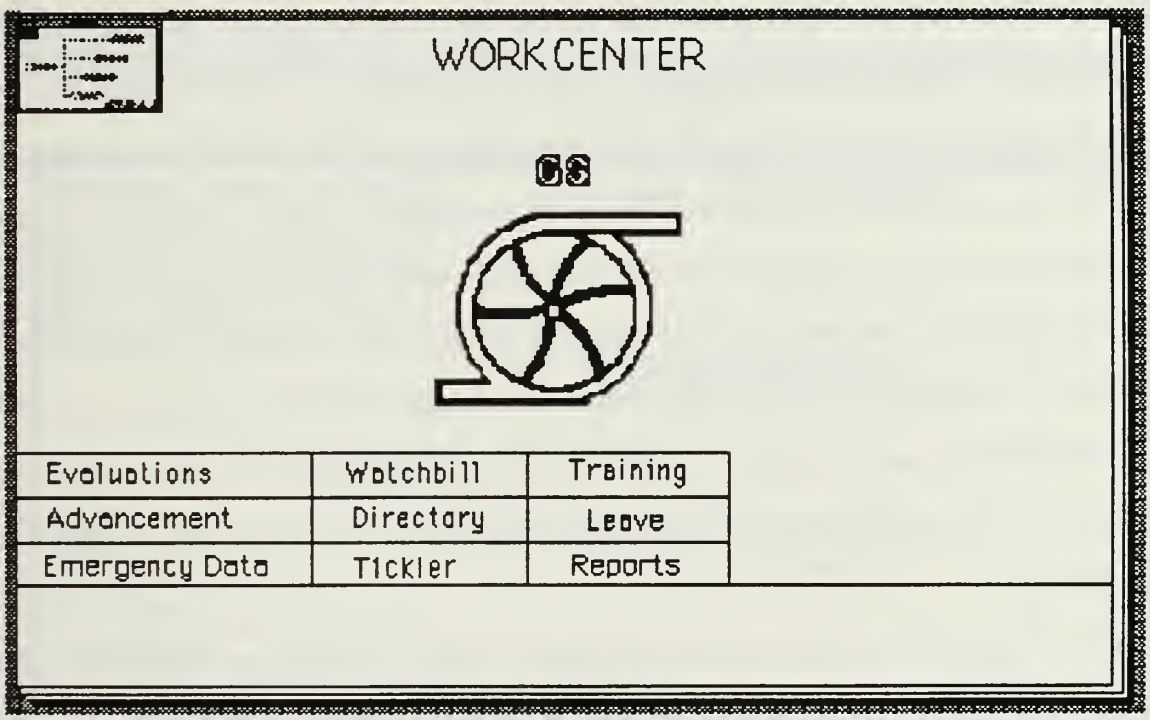

Figure 5 "Workcenter"

Evaluations can be displayed by clicking on the evaluation button (Figure 6). ARGOS will ask if you desire to an old evaluation or create a new one. In either case the person's SSN is entered and evaluation appears with known information being already displayed. ARGOS then prompts the user to enter grade scores in each of the specific areas. Grades are checked for both validity and in case a low grade is assigned ARGOS warns the user that further comments will have to be made. Upon completion of review the evaluation can be sent to the next appropriate person for review and signature.

ARGOS will generate a three, four or five section inport or underway watchbill for a workcenter or division (Figure 7). Figure 7 shows a three section underway watchbill format, the other watchbills are of the same format the only difference being more watchsections are available. ARGOS summarizes them for approval by the department head. At the workcenter level, upon clicking on the "write" button, ARGOS will display a list of watchstations available for the watchbill. The user selects the first watchstation and ARGOS will search the database for qualified personnel. Upon completion of the search a list is displayed and the user selects a person for each watch section. This process continues until the necessary number of watchstations is reached and the user may then save the watchbill. This option will also allow for modifying the watchstation list to accommodate any changes in manning.

The training button allows the user to display a status on either an individual or the entire workcenter. The individual status summarizes a person's PQS progress and lists qualified watchstations (Figure 8). The workcenter status summarizes the deficient personnel within a workcenter (Figure 9). This is a simple but direct way of

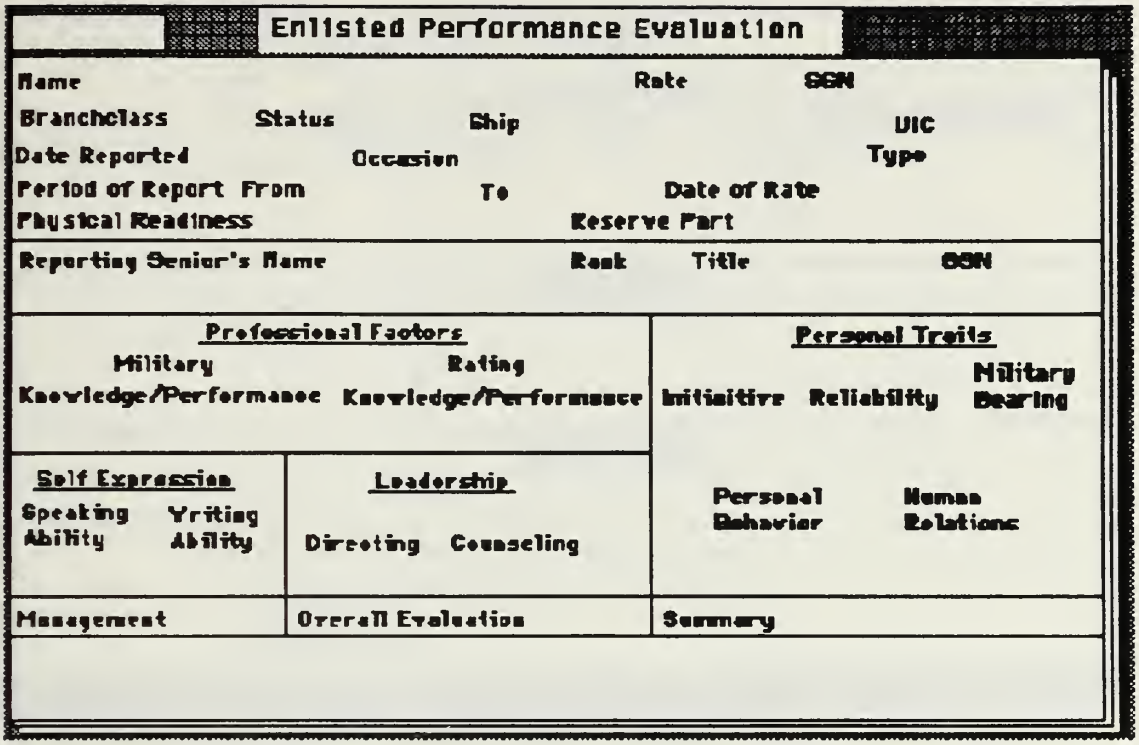

Figure 6.1 "Evaluation Page 1"

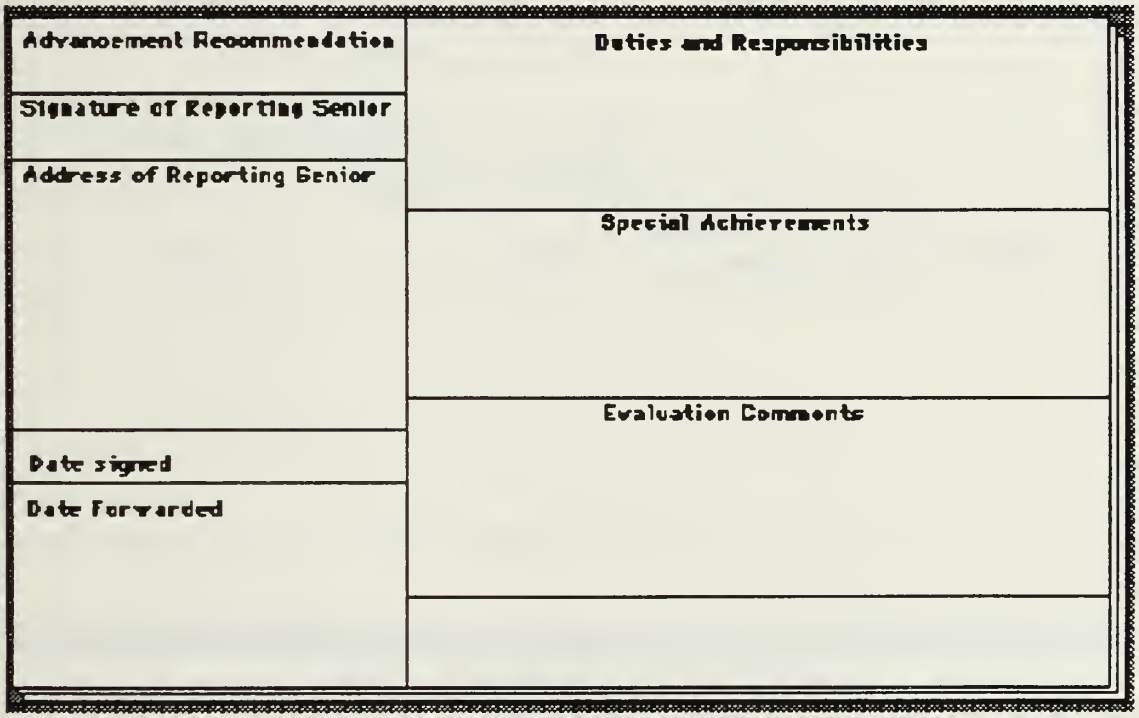

Figure 6.2 "Evaluation Page 2"

UNDERWAY WATCHBILL FOR

SECTION 1 TO

WATCH STATION	NAME	RATE
	SECTION 2	
	SECTION 3	

Figure 7 "Watchbill"

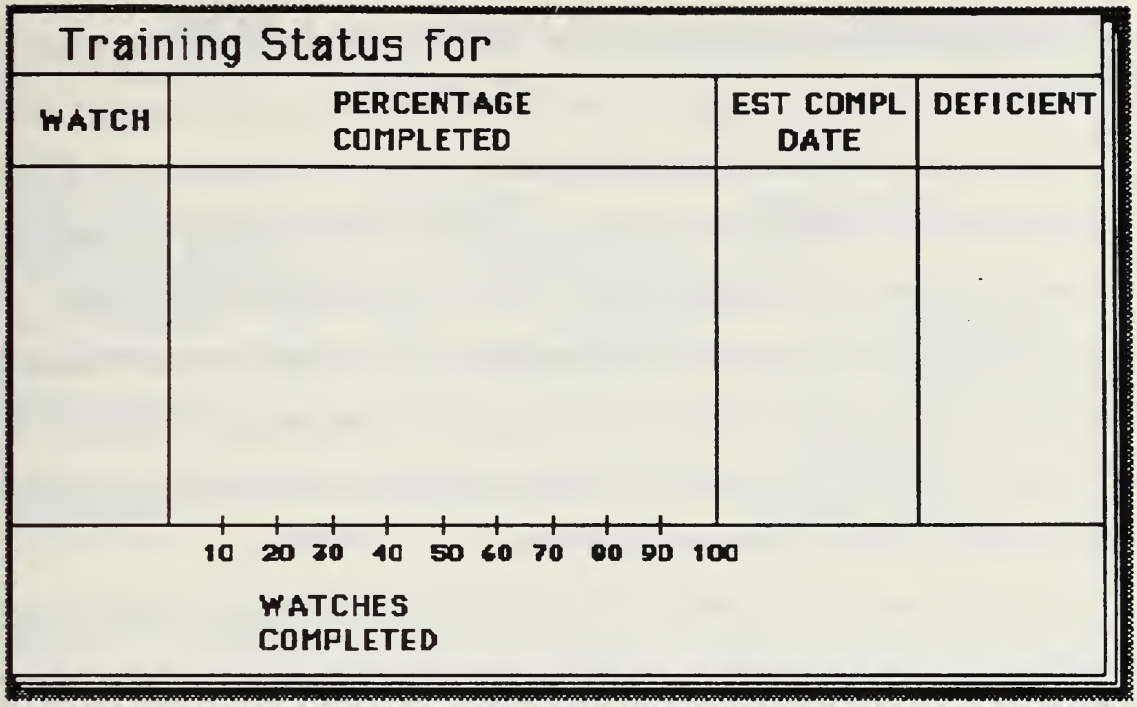

Figure 8 "Individual Training Status"

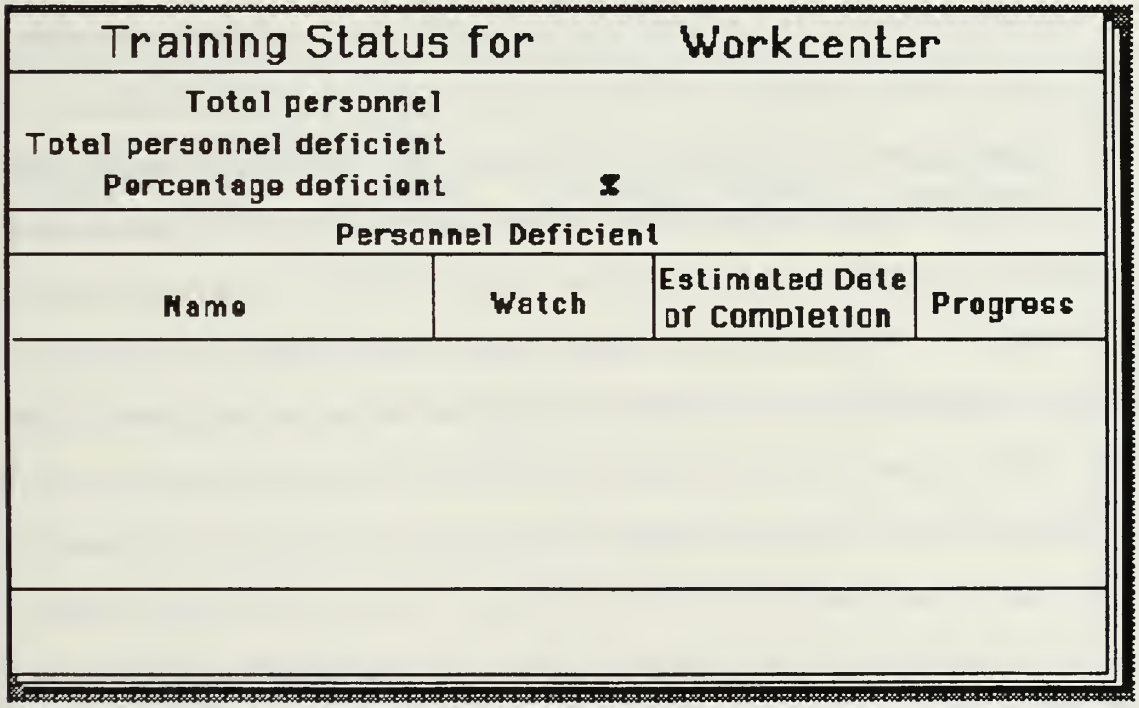

Figure 9 "Workcenter Training Status"

alerting the officer to possible problems Another option is to update a person's training record and ARGOS takes the user directly to this area of the person's record.

The advancement button will ask the user for the SSN of the person going up for advancement and the rate the person desires advancement in; ARGOS will then check his record for items such as time in rate, schools required and PQS completed. The user will then receive from ARGOS the rate the person is eligible for or the items the person has yet to complete before he can go up for the rate specified. This option will save both officers and the ship's office work in having to determine this each time a person requests to take the advancement exam.

A complete listing of all personnel by name and social security number can be referenced by using the directory button. This will provide for the user a quick reference to the information needed to perform most of ARGOS's functions or to fill out reports and forms. This will alleviate the need to keep on hand or to gather this information before accessing ARGOS to do any work.

The leave option will display a leave chit and allow the user to complete one in much the same manner as the evaluation was filled out (Figure 10). This chit can be saved and forwarded to the appropriate people. ARGOS will also determine an individual's or entire workcenter's leave status. The individual status displays the person's leave history and can display the ship's schedule for the quarter the leave falls within (Figure 11). This will allow the officer to have immediate access to the information needed to decide whether or not to let the individual go on leave. The workcenter's leave status may also be shown so that the officer may control the amount of personnel he allows to go on leave from a particular workcenter (Figure 12). This decision aid will allow the officer to approve or disprove leave chits and summarize personnel's leave status without leaving his desk.

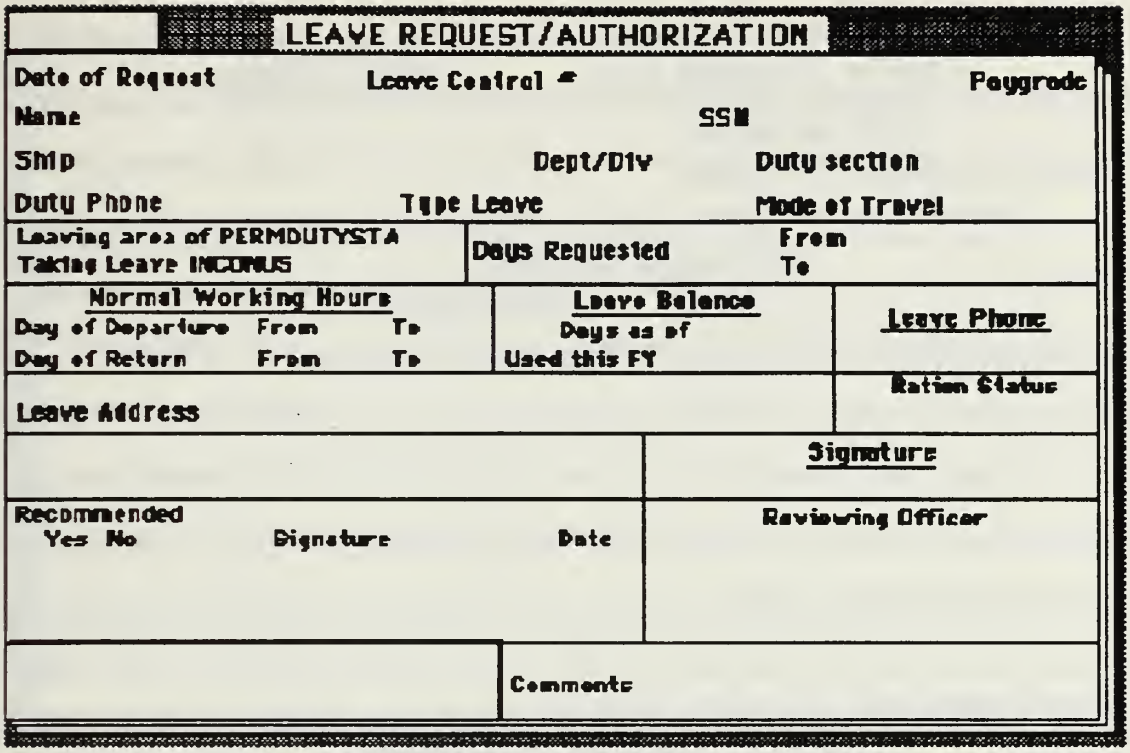

Figure 10 "Leave Chit"

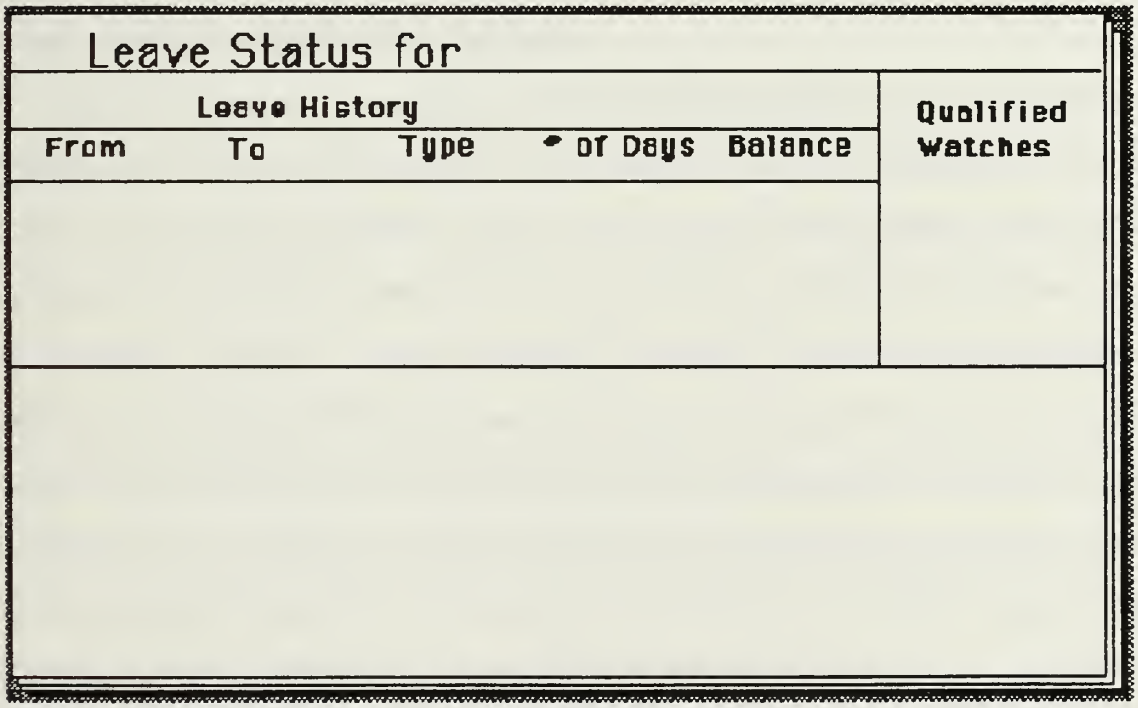

Figure 11 "Individual Leave Status"

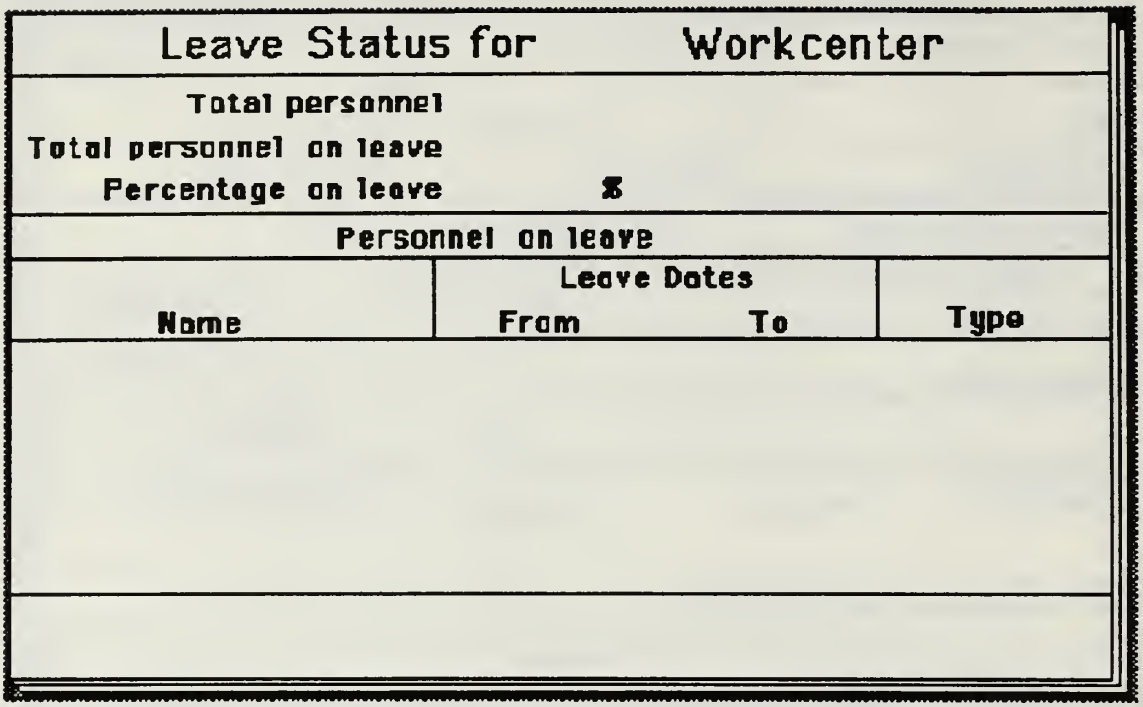

Figure 12 "Workcenter Leave Status"

In case of an emergency or a need to contact a person on leave, the user need only to type in the SSN of the person to be contacted and the emergency data and leave page will appear. This will give immediate access to the required information so that the person can be contacted as quickly as possible.

The tickler button will allow for informal and expeditious transfer of "hot items" from superiors to subordinates. The subordinate will be able to receive the option in his tickler and comment on it. The subordinate officer may then return the tickler item to the sender with the updated information or completed action. Each officer will be keep track of his own action items and those he may have sent to his subordinates with expected completion dates and comments. The officer may also indicate whether a certain item should be included in his schedule module; ARGOS will then update his personal calendar adding this item. This option will drastically reduce the time needed to update these type of items and reduce the need for formal meetings in order to get a handle on what has been completed.

The reports button is a generic word processing function that will launch a designated word processing package when required. The button provides for saving copies of all reports generated so that formats and routine reports can be easily duplicated in the future. When the button is clicked on, ARGOS will ask the user if an old report is needed or a new one should be created. If an old one is specified the user may immediately edit the old version and then save the new report as a separate report or overwrite the old. The reports then can be electronically sent up the chain of command for comments or approval before being printed. The time and editing savings from this option is most obvious and will save the officer tremendous legwork in running the routine correspondence around the ship. Reports will not be lost as easily either.

There are two more options only available at the divisional and departmental level; schedules and gains/losses. The schedules option draws it's information from the ship's schedule, in the Operations module, and allows the officer to plan any major work or events for his department. The option will automatically input the events from the training and tickler options so a comprehensive workload can be displayed.

In order to further aid the officer in personnel planning the gains/losses button will display by division or department prospective gains and losses. The button will list personnel with their arrival or departure date and also determine for the officer if by losing a person his readiness is effected or a critical Naval Equivalent Code (NEC) will be needed to fill the opening. This will catch at the earliest opportunity any manning shortages that the ship may have coming up and give the officer time to coordinate a solution.

As was stated before these options are not all inclusive and because of the modularity of ARGOS modules and options may added and deleted as necessary. These options demonstrate the power and capabilities of such a system as ARGOS and as more and more users interact with the system new methods and options will be discovered and implemented.

VI. CONCLUSIONS

ARGOS as an object oriented multi-media database far exceed the capabilities of current systems being developed. ARGOS combines diverse operations and functions into a complete system with major design focus into the human interface factors. ARGOS is a system wherein a user or a developer can program modules to best fit the Navy's needs now and into the future. ARGOS, if fully implemented and delivered to the fleet, would offer unconsidered benefits and cost savings to the Navy. As has been demonstrated by the development shown here and by previous developers; the process of implementing a new module is straightforward and easy to learn from the knowledgeable user to the developer. The hardware and actual software itself should not be the selling point of ARGOS but the functionality, modularity, English syntax language and user interface promote the best reasons for adopting such a system as ARGOS.

The Secretary of the Navy has seen the role of information and the need for information systems for operational and administrative purposes. In SECNAVINST 5230.10, the Secretary outlines his goals and strategies for information systems within the Navy. ARGOS's development in many ways mirrors what the Secretary states as goals or attributes of a system to be desired.[Ref. 4]

The first goal is to enhance productivity of Department of the Navy components. Some strategies to implement this goal are emphasizing human engineering, a reduction in the paperwork burden, increased accessibility of systems, store information once, and expand the use of decision systems. ARGOS's development

and implementation illustrates each one of these strategies in some detail. Paperwork burden will surely be lessened and the user interface with ARGOS is extremely friendly and comprehendible. By storing personnel data in a single database with relatively cheap remote access terminals distributed throughout the ship, the information can truly be used as a corporate asset. A second goal for information is to become a force multiplier. With limiting budgets and limited administrative personnel, an information system must help increase a person's productivity so as to be a force multiplier. ARGOS accomplishes this in many ways by assuming the responsibilities as the information gatherer, manipulator and presenting the output in such a manner so that the officer has quality information in a format that is easy read and the facts or problems are clear.

ARGOS's attributes and capabilities continue to parallel the Secretary's desires and goals for information systems. ARGOS was designed and implemented to fill in the gaps of information technology that exist in the Navy and exploit new technology. By providing in one cohesive multi-media database a system that can tremendously improve the productivity and effectiveness of all officers and personnel, ARGOS meets the needs of the Navy now and is expandable into the future. For these reasons and the ones expressed before, a system such as ARGOS will provide more efficient, well informed and better quality decision makers for the Navy. These officers and other decision makers will, because of ARGOS, have more time to devote to professional reading and training, thus increasing the Navy's readiness

ARGOS has many areas that still need to be analyzed and designed but the significance of such a system is readily apparent. Continuing research in the uses and applicability of such systems and environments would be most advantageous for the Navy and other services. Some topics for further research are listed below:

- Expanding the administrative and personnel areas to incorporate more functions or modules.
- Redesigning or incorporating SUPERCARD capabilities and functionalities into the ARGOS system.
- Conduct a feasibility study to determine the actual time or weight savings ARGOS may achieve.
- Development of the printer or scanner interfaces to provide for the reading and output of personnel data on standard forms.
- Expand the Legal area to cover various personnel legal problems such as being able to create a rough Will or Power of Attorney.
- Develop an expert system shell that would be used for implementing other collateral duties in the ARGOS system.

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APPENDIX A

```
SCRIPTS FOR STACK: admin
========================================================
** STACK SCRIPT ************************************
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
  end if
end closestack
** BKGND #1, FIELD #1: Description ***********************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ***************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ******************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, BUTTON #1: EXIT *****************************************
on mouseUp
  POP CARD
end mouseUp
** BKGND #1, BUTTON #2: VOICE ****************************************
on mousedown
  -- toggles voice on/off
```

```
 if the hilite of me then
  ARGOSTALK "VOICE ON"
 else
  TALK "VOICE OFF", 160, 115
 end if
end mousedown
** BKGND #2, FIELD #1: Description ************************************
on mouseup
 -- this handler turns show field "description" off and
 -- show the card picture with associated buttons on.
 show card picture
 set the highlight of background btn "VOICE" to true
 set visible of field "Description" to false
 repeat with i=1 to the number of buttons
  show button i
 end repeat
 show background button "sorry"
end mouseup
** BKGND #2, FIELD #3: BUTTONS ***************************************
on mouseup
 GLOBAL CARDID
 put CARDID into SECOND ITEM OF line¬
 (clickline()) of field "DATA"
 SET VISIBLE OF FIELD "BUTTONS" TO FALSE
 show card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to true
 END REPEAT
end mouseup
** BKGND #2, FIELD #4: data ******************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #2, FIELD #8: listname **************************************
--GRABS THE PERSON THE USER HAS SELECTED AND GETS THE PERSON'S RATE
AND
--THEN PUTS IT INTO THE NEXT OPEN WATCH SECTION
on mouseUp
 global watchname,i,m,nextin
 set lockText of bkgnd field "listname" to false
 put line clickline() of bkgnd field "listname" into realNAME
 set lockText of bkgnd field "listname" to true
 add 1 to m
 --BRANCHES INTO SELECTION FOR WATCHES
 put "point-" & m into pointer
 put "point-" & m-1 into pointerlast
 --THIS TOGGLES THE ARROW BUTTONS
 if m < 5
```

```
then
  show button pointer
  hide button pointerlast
 else
  hide button pointerlast
 end if
 lock screen
 put "5wsta-" & m into tempfield
 put watchname into line i of bkgnd field tempfield
 push card
 go to stack enlisted
 find  whole realname of bkgnd field "ename"
 put background field "erate" into temprate
 pop card
 put "5wname-" & m into namefield
 put "5wrate-" & m into ratefield
 put realname into line i of bkgnd field namefield
 put temprate into line i of bkgnd field ratefield
 unlock screen
 --COMPLETED ALL FOUR SECTIONS AND SEES IF ANOTHER WATCHSTATION IS
REQUIRED
 if m=5
 then
  answer "Add another watch station?" with "OK" or "Cancel"
  if it = "OK"
  then
   put 0 into m
   add 1 to i
   hide bkgnd field listname
   hide button "choose a name!"
   push card
   go to card id 2862
   exit mouseUP
   unlock screen
  else
   --ROUTINE SAVES THE DOCUMENT IN STACK SHIP AND PUTS THE CARD ID
   --INTO THE WORKCENTER'S INBOX
   put 0 into m
   put 0 into i
   hide bkgnd field listname
   hide button "choose a name!"
   answer "Would you like to save this document?" with "OK" or "Cancel"
   if it is "OK"
   then
    lock screen
    put the ID of this card into nextin
    go to card id 3258
    send mouseup to bkgnd field "infield"
    unlock screen
    exit mouseUP
   end if
```

```
    end if
    unlock screen
  end if
  unlock screen
end mouseUp
** BKGND #2, BUTTON #1: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #2, BUTTON #2: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-1"- textHeight of field "5wsta-1"
  if it <0 then get 0
  set scroll of field "5wname-1" to it
  set scroll of field "5wrate-1" to it
  set scroll of field "5wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #3: wdown ************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-1" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-1"+ textHeight of field "5wsta-1"
  set scroll of field "5wname-1" to it
  set scroll of field "5wrate-1" to it
  set scroll of field "5wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #4: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-2"- textHeight of field "55wsta-2"
  if it <0 then get 0
  set scroll of field "5wname-2" to it
  set scroll of field "5wrate-2" to it
  set scroll of field "5wsta-2" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #5: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
```

```
  lock screen
  get scroll of field "5wsta-3"- textHeight of field "5wsta-3"
  if it <0 then get 0
  set scroll of field "5wname-3" to it
  set scroll of field "5wrate-3" to it
  set scroll of field "5wsta-3" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #6: wdown ************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-2" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-2"+ textHeight of field "5wsta-2"
  set scroll of field "5wname-2" to it
  set scroll of field "5wrate-2" to it
  set scroll of field "5wsta-2" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #7: wdown ************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-3" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-3"+ textHeight of field "5wsta-3"
  set scroll of field "5wname-3" to it
  set scroll of field "5wrate-3" to it
  set scroll of field "5wsta-3" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #8: wup **************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-4"- textHeight of field "5wsta-444"
  if it <0 then get 0
  set scroll of field "5wname-4" to it
  set scroll of field "5wrate-4" to it
  set scroll of field "5wsta-4" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #9: wup **************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-5"- textHeight of field "5wsta-5"
  if it <0 then get 0
  set scroll of field "5wname-5" to it
  set scroll of field "5wrate-5" to it
```

```
  set scroll of field "5wsta-5" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #10: wdown ***********************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-4" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-4"+ textHeight of field "5wsta-4"
  set scroll of field "5wname-4" to it
  set scroll of field "5wrate-4" to it
  set scroll of field "5wsta-4" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #11: wdown ***********************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-5" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-5"+ textHeight of field "5wsta-5"
  set scroll of field "5wname-5" to it
  set scroll of field "5wrate-5" to it
  set scroll of field "5wsta-5" to it
  unlock screen
end mouseStillDown
** CARD #1, BUTTON #1: forms *************************************
on mouseDown
  put "REQUEST CHITS" into menu1
  put return & "CHECK IN" after menu1
  put return & "CHECK OUT" after menu1
  put return & "REPORTS" after menu1
  put return & "MISC" after menu1
  get HPopupMenu(menu1,0,83,331)
  if it is not zero then
    Put Item 1 of it into TheLine
    put Item 2 of it into TheItem
    -- CREATES THE NEW SET OF DIVO NOTEBOOK PAGES THAT ARE HARD LINKED
    If TheLine=2 then
      talk "Check in", 160,115
      show button "working..."
      lock screen
      go to last card of stack enlisted
      repeat with i=1 to 4
        put "enl-" & i into tempcard
        push card
        go to card tempcard of stack temp
        doMenu "Copy Card"
        pop card
        doMenu "Paste Card"
```

```
    end repeat
    go to stack ADMIN
    hide button "working..."
    set the hilite of button forms to false
    -- BUILD A LINKED LIST INSIDE THE PAGES FOR HARD LINKING
    go to last card of stack enlisted
    Repeat with y = 1 to 4
      put the ID of this card into line y of linklist
      set visible of field "linklist" to false
      go prev
    end repeat
    go to line 1 of linklist
    put line 2 of linklist into line 2 of field "linklist"
    go prev
    repeat with z = 2 to the number of lines of linklist
      go to line z of linklist
      put line z-1 of linklist into line 1 of field "linklist"
      put line z+1 of linklist into line 2 of field "linklist"
      go prev
    end repeat
    go next
    unlock screen
  end if
  If theline=3 then
    talk "Checking out", 160,115
    ask "What is the SSN of the person checking out ?"
    if it is "Cancel" or it is empty then
      exit mousedown
    else
      show button "working..."
      lock screen
      push card
      go to stack enlisted
      find whole it of field ssn
      if the result is  empty then
        repeat with ii=1 to 4
          domenu "Delete Card"
        end repeat
      end if
      pop card
    end if
    unlock screen
    hide button "working..."
  end if
end if
if theline = 4 then
  go to stack enlisted
  find whole "333-33-3333" of field ssn
  go next
  get field "lfrom"
  put it into startd
```

```
   put startd
  end if
end mouseDown
** CARD #1, BUTTON #2: New Button ************************************
on mouseDown
  put "INDIVIDUALS" into menu1
  put return & "POAM" after menu1
  put return & "MISC" after menu1
  get HPopupMenu(menu1,0,149,296)
  if it is not zero then
    Put Item 1 of it into TheLine
    put Item 2 of it into TheItem
    If TheLine=1 and TheItem=2 then
    end if
  end if
end mouseDown
** CARD #1, BUTTON #3: New Button ************************************
on mouseDown
  put "INSPECTIONS" into menu1
  put return & "POAM" after menu1
  put return & "BERTHING" after menu1
  put return & "LORTARP" after menu1
  put return & "TICKLER SCHEDULE" after menu1
  put return & "MISC" after menu1
  get HPopupMenu(menu1,0,213,250)
  if it is not zero then
    Put Item 1 of it into TheLine
    put Item 2 of it into TheItem
    If TheLine=1 and TheItem=2 then
    end if
  end if
end mouseDown
** CARD #1, BUTTON #4: New Button ************************************
on mouseDown
  put "NJP" into menu1
  put return & "COURTS-MARTIAL,SUMMARY,SPECIAL,GENERAL" after menu1
  put return & "ADMIN BOARD" after menu1
  put return & "REPORTS,REPORT CHIT,CRIMINAL ACTIVITY" after menu1
  put return & "SCHEDULE" after menu1
  put return & "MISC" after menu1
  get HPopupMenu(menu1,0,277,195)
  if it is not zero then
    Put Item 1 of it into TheLine
    put Item 2 of it into TheItem
    If TheLine=1 and TheItem=2 then
    end if
  end if
end mouseDown
```

APPENDIX B

```
SCRIPTS FOR STACK: personnel
============================================================
** STACK SCRIPT ************************************
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
  end if
end closestack

** BKGND #1, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, BUTTON #1: HELP ************************************
on mouseUp
  PLAY "HELP"
  push this card
  go to stack "ARGOS HELP"
end mouseUp
```

```
** BKGND #1, BUTTON #2: UP ***********************************
on mouseUp
  go to card id 10931 of stack "Argos"
end mouseUp
** BKGND #1, BUTTON #3: Find **********************************
on mouseUp
  -- this handler provides for a modified search.
  put the id of this card into tempid
  PLAY "SEARCH"
  ask"Please enter Search String."
  if visible of field "Description" then
    set lockscreen to true
    set the highlight of background btn "VOICE" to false
    put "find string" && quote & it & quote && "in field Description"¬
    into msg
    hide msg
    send returnkey to hypercard
    if tempid <> id of this card then
      go recent
      set the highlight of background btn "VOICE" to true
      set lockscreen to false
    end if
  else
    hide msg
    put "find string" && quote & it & quote && "in field NOMENCLATURE" into msg
    hide msg
    send returnkey to hypercard
  end if
end mouseUp
** BKGND #1, BUTTON #4: LIBRARY ***********************************
on mouseUp
  PLAY "LIBRARY"
  push card
  go to card library OF STACK "ARGOS"
end mouseUp
** BKGND #1, BUTTON #5: EXIT ***********************************
on mouseUp
  gohome
  go home
end mouseUp
** BKGND #1, BUTTON #6: PRINT **********************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #1, BUTTON #7: VOICE **********************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
```

```
   TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #2, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #2, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #2, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #2, BUTTON #1: EXIT ************************************
on mouseUp
  POP CARD
end mouseUp
** BKGND #2, BUTTON #2: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** CARD #1, BUTTON #1: Combat Systems ************************************
on mouseDown
  put "Department,Head,Yeoman" into menu1
  put return & "Division,CS-1,CS-2,CS-3,CS-4" after menu1
    put return & "Workcenter,CS01,CS02,CS03,CS04,CS05,CS06,CS07,CS08,CS09" after
```

```
menu1
 get HPopupMenu(menu1,0,149,277)
 if it is not zero then
  Put Item 1 of it into TheLine
  put Item 2 of it into TheItem
  -- MAKE SURE VALID CHOICE
  If TheLine=0 and  TheItem is empty
  then
   exit mousedown
  end if
  -- DEPARTMENT SELECTED
  If Theline=1 and Theitem=2
  then
   lock screen
   set hilite of button "Combat systems" to false
   go to stack ship3
   find "COMBAT SYSTEMS" in field Dept
   click at it
   unlock screen
   exit mouseDown
  end if
  -- NEXT THREE ARE DIVISION SELECTIONS
  If Theline=2 and Theitem=2
  then
   lock screen
   set hilite of button "Combat systems" to false
   go to stack ship2
   find "CS-1" in field div
   click at it
   unlock screen
   exit mouseDown
  end if
  If Theline=2 and Theitem=3
  then
   lock screen
   set hilite of button "Combat systems" to false
   go to stack ship2
   find "CS-2" in field div
   click at it
   unlock screen
   exit mouseDown
  end if
  If Theline=2 and Theitem=4
  then
   lock screen
   set hilite of button "Combat systems" to false
   go to stack ship2
   find "CS-3" in field div
   click at it
   unlock screen
   exit mouseDown
```

```
end if
If Theline=2 and Theitem=5
then
  lock screen
  set hilite of button "Combat systems" to false
  go to stack ship2
  find "CS-4" in field div
  click at it
  unlock screen
  exit mouseDown
end if
-- CHECK TO SEE IF WORKCENTER IS SELECTED
If TheLine=3 and TheItem=2 then
  lock screen
  set hilite of button "Combat systems" to false
  go to stack ship
  find cs01 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=3 then
  lock screen
  set hilite of button "Combat systems" to false
  go to stack ship
  find cs02 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=4 then
  lock screen
  set hilite of button "Combat systems" to false
  go to stack ship
  find cs03 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=5 then
  lock screen
  set hilite of button "Combat systems" to false
  go to stack ship
  find cs04 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=6 then
  lock screen
  set hilite of button "Combat systems" to false
  go to stack ship
  find cs05 in field workc
  click at it
  unlock screen
```

```
    end if
    If TheLine=3 and TheItem=7 then
      lock screen
      set hilite of button "Combat systems" to false
      go to stack ship
      find cs06 in field workc
      click at it
      unlock screen
    end if
    If TheLine=3 and TheItem=8 then
      lock screen
      set hilite of button "Combat systems" to false
      go to stack ship
      find cs07 in field workc
      click at it
      unlock screen
    end if
    If TheLine=3 and TheItem=9 then
      lock screen
      set hilite of button "Combat systems" to false
      go to stack ship
      find cs08 in field workc
      click at it
      unlock screen
    end if
    If TheLine=3 and TheItem=10 then
      lock screen
      set hilite of button "Combat systems" to false
      go to stack ship
      find cs09 in field workc
      click at it
      unlock screen
    end if
  end if
end mouseDown
** CARD #1, BUTTON #2: SHIP CONTROL ************************************
on mouseDown
  put "Department,Head,Yeoman" into menu1
  put return & "Division,SC-1,SC-2,SC-3" after menu1
  put return & "Workcenter,OC01,OC02,OC03" after menu1
  get HPopupMenu(menu1,0,216,244)
  if it is not zero then
    Put Item 1 of it into TheLine
    put Item 2 of it into TheItem
    -- MAKE SURE VALID CHOICE
    If TheLine=0 and  TheItem is empty
    then
      exit mousedown
    end if
    -- DEPARTMENT SELECTED
    If Theline=1 and Theitem=2
```

```
then
  lock screen
  set hilite of button "SHIP CONTROL" to false
  go to stack ship3
  find "SHIP CONTROL" in field Dept
  click at it
  unlock screen
  exit mouseDown
end if
-- NEXT THREE ARE DIVISION SELECTIONS
If Theline=2 and Theitem=2
then
  lock screen
  set hilite of button "SHIP CONTROL" to false
  go to stack ship2
  find "SC-1" in field div
  click at it
  unlock screen
  exit mouseDown
end if
If Theline=2 and Theitem=3
then
  lock screen
  set hilite of button "SHIP CONTROL" to false
  go to stack ship2
  find "SC-2" in field div
  click at it
  unlock screen
  exit mouseDown
end if
If Theline=2 and Theitem=4
then
  lock screen
  set hilite of button "SHIP CONTROL" to false
  go to stack ship2
  find "SC-3" in field div
  click at it
  unlock screen
  exit mouseDown
end if
-- CHECK TO SEE IF WORKCENTER IS SELECTED
If TheLine=3 and TheItem=2 then
  lock screen
  set hilite of button "SHIP CONTROL" to false
  go to stack ship
  find OC01 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=3 then
  lock screen
```

```
    set hilite of button "SHIP CONTROL" to false
    go to stack ship
    find OC02 in field workc
    click at it
    unlock screen
   end if
   If TheLine=3 and TheItem=4 then
    lock screen
    set hilite of button "SHIP CONTROL" to false
    go to stack ship
    find OC03 in field workc
    click at it
    unlock screen
   end if
  end if
end mouseDown
** CARD #1, BUTTON #3: SUPPORT ************************************
on mouseDown
    put "Department,Head,Yeoman" into menu1
  put return & "Division,S-1,S-2,S-3,S-4" after menu1
  put return & "Workcenter,SS01,SS02,SS03,SS04,SS05,SS06,SS07" after menu1
  get HPopupMenu(menu1,0,283,192)
  if it is not zero then
   Put Item 1 of it into TheLine
   put Item 2 of it into TheItem
   -- MAKE SURE VALID CHOICE
   If TheLine=0 and  TheItem is empty
   then
    exit mousedown
   end if
   -- DEPARTMENT SELECTED
   If Theline=1 and Theitem=2
   then
    lock screen
    set hilite of button "SUPPORT" to false
    go to stack ship3
    find "SUPPORT" in field Dept
    click at it
    unlock screen
    exit mouseDown
   end if
   -- NEXT THREE ARE DIVISION SELECTIONS
   If Theline=2 and Theitem=2
   then
    lock screen
    set hilite of button "SUPPORT" to false
    go to stack ship2
    find "S-1" in field div
    click at it
    unlock screen
    exit mouseDown
```

```
end if
If Theline=2 and Theitem=3
then
  lock screen
  set hilite of button "SUPPORT" to false
  go to stack ship2
  find "S-2" in field div
  click at it
  unlock screen
  exit mouseDown
end if
If Theline=2 and Theitem=4
then
  lock screen
  set hilite of button "SUPPORT" to false
  go to stack ship2
  find "S-3" in field div
  click at it
  unlock screen
  exit mouseDown
end if
If Theline=2 and Theitem=5
then
  lock screen
  set hilite of button "SUPPORT" to false
  go to stack ship2
  find "S-4" in field div
  click at it
  unlock screen
  exit mouseDown
end if
-- CHECK TO SEE IF WORKCENTER IS SELECTED
If TheLine=3 and TheItem=2 then
  lock screen
  set hilite of button "SUPPORT" to false
  go to stack ship
  find Ss01 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=3 then
  lock screen
  set hilite of button "SUPPORT" to false
  go to stack ship
  find Ss02 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=4 then
  lock screen
  set hilite of button "SUPPORT" to false
```

```
    go to stack ship
    find Ss03 in field workc
    click at it
    unlock screen
   end if
   If TheLine=3 and TheItem=5 then
    lock screen
    set hilite of button "SUPPORT" to false
    go to stack ship
    find Ss04 in field workc
    click at it
    unlock screen
   end if
   If TheLine=3 and TheItem=6 then
    lock screen
    set hilite of button "SUPPORT" to false
    go to stack ship
    find Ss05 in field workc
    click at it
    unlock screen
   end if
   If TheLine=3 and TheItem=7 then
    lock screen
    set hilite of button "SUPPORT" to false
    go to stack ship
    find Ss06 in field workc
    click at it
    unlock screen
   end if
   If TheLine=3 and TheItem=8 then
    lock screen
    set hilite of button "SUPPORT" to false
    go to stack ship
    find Ss07 in field workc
    click at it
    unlock screen
   end if
  end if
end mouseDown
** CARD #1, BUTTON #4: eng ************************************
on mouseDown
 put "Department,Head,Yeoman" into menu1
  put return & "Division,E-1,E-2,E-3" after menu1
  put return & "Workcenter,EMO1,EM02,EM03,EM04,EM05,EM06,ER09" after menu1
  get HPopupMenu(menu1,0,82,313)
  if it is not zero then
   Put Item 1 of it into TheLine
   put Item 2 of it into TheItem
   -- MAKE SURE VALID CHOICE
   If TheLine=0 and  TheItem is empty
   then
```

```
  exit mousedown
end if
-- DEPARTMENT SELECTED
If Theline=1 and Theitem=2
then
  lock screen
  set hilite of button eng to false
  go to stack ship3
  find "Engineering" in field Dept
  click at it
  unlock screen
  exit mouseDown
end if
-- NEXT THREE ARE DIVISION SELECTIONS
If Theline=2 and Theitem=2
then
  lock screen
  set hilite of button eng to false
  go to stack ship2
  find "E-1" in field div
  click at it
  unlock screen
  exit mouseDown
end if
If Theline=2 and Theitem=3
then
  lock screen
  set hilite of button eng to false
  go to stack ship2
  find "E-2" in field div
  click at it
  unlock screen
  exit mouseDown
end if
If Theline=2 and Theitem=4
then
  lock screen
  set hilite of button eng to false
  go to stack ship2
  find "E-3" in field div
  click at it
  unlock screen
  exit mouseDown
end if
-- CHECK TO SEE IF WORKCENTER IS SELECTED
If TheLine=3 and TheItem=2 then
  lock screen
  talk "EE M 01",160,115
  set hilite of button eng to false
  go to stack ship
  find em01 in field workc
```

```
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=7 then
  lock screen
  set hilite of button eng to false
  go to stack ship
  find em06 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=3 then
  lock screen
  set hilite of button eng to false
  go to stack ship
  find EM02 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=4 then
  lock screen
  set hilite of button eng to false
  go to stack ship
  find EM03 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=5 then
  lock screen
  set hilite of button eng to false
  go to stack ship
  find EM04 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=6 then
  lock screen
  set hilite of button eng to false
  go to stack ship
  find EM05 in field workc
  click at it
  unlock screen
end if
If TheLine=3 and TheItem=8 then
  lock screen
  set hilite of button eng to false
  go to stack ship
  find ER09 in field workc
  click at it
  unlock screen
end if
```

APPENDIX C

```
SCRIPTS FOR STACK: ship1
========================================================
** STACK SCRIPT ************************************
function CLICKLINE
  return trunc(((scroll of the target)+(item 2 of the clickloc)-(item 2 of the rect of the target)) div the
textheight of the target)+1
end CLICKLINE
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
  end if
end closestack
** BKGND #1, FIELD #1: Description ***********************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ***************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ******************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, FIELD #7: infield ***************************************
--THIS HANDLER ADDS ONE TO INBOX COUNTER WHEN A NEW
-- DOCUMENT ARRIVES AND PUTS THE CARD ID INTO THE NEXT VACANT LINE
```

```
on mouseup
 global nextin,countin
 get line 1 of bkgnd field "infield"
 if it is empty
 then
  put 1 into countin
  put nextin into line countin of bkgnd field "infield"
 else
  add 1 to countin
  put nextin into line countin of bkgnd field "infield"
 end if
end mouseup
** BKGND #1, BUTTON #1: UP ************************************
on mouseUp
 -- goes up the hierarchy
 visual effect zoom out
 go to card id field "Uplink"
end mouseUp
** BKGND #1, BUTTON #2: PRINT **********************************
on mouseUp
 TALK "Can not print at this time",160,115
end mouseUp
** BKGND #1, BUTTON #3: VOICE **********************************
on mousedown
 -- toggles voice on/off
 if the hilite of me then
  ARGOSTALK "VOICE ON"
 else
  TALK "VOICE OFF", 160, 115
 end if
end mousedown
** BKGND #1, BUTTON #4: New Button *****************************
on mouseUp
 go to card id 2825 of stack "personnel"
end mouseUp
** BKGND #1, BUTTON #5: New Button *****************************
on mouseUp
 answer"This area has not been developed!"
end mouseUp
** BKGND #1, BUTTON #6: evaluations ****************************
--THIS SCRIPT GOES OUT TO STACK TEMP AND RETRIEVES THE BASIC EVALUATION
--CARDS AND PUTS THEM INTO STACK SHIP FOR WORKCENTER USE
on mousedown
 put "New" into menu1
 put return & "Old" after menu1
 get HPopupMenu(menu1,0,240,141)
 if it is not zero then
  Put Item 1 of it into TheLine
  put Item 2 of it into TheItem
  If Theline=1
  then
```

```
TALK "PREPARE EVALUATIONS",160, 115
 show button "working..."
lock screen
push card
repeat with i=1 to 2
  put "enleval-" & i into tempcard
  push card
  go to card tempcard of stack temp
  doMenu "Copy Card"
  pop card
  doMenu "Paste Card"
end repeat
go to stack ship
hide button "working..."
set the hilite of background button evaluations to false
--THIS BUILDS A LINKED LIST INSIDE THE PAGES FOR HARD LINKING
go to card "enleval-2" of stack ship
Repeat with y = 1 to 2
  put the ID of this card into line y of linklist
  set visible of field "linklist" to false
  go prev
end repeat
go to line 1 of linklist
put line 2 of linklist into line 2 of field "linklist"
go prev
repeat with z = 2 to the number of lines of linklist
  go to line z of linklist
  put line z-1 of linklist into line 1 of field "linklist"
  put line z+1 of linklist into line 2 of field "linklist"
  go prev
end repeat
go next
unlock screen
end if
If Theline=2
then
  ask "Please, enter the SSN." with "111-11-1111"
  put it into varssn
  lock screen
  push card
  put "enleval-1" into tempcard
  go to card tempcard
  if the result is not empty
  then
    --COULDN'T FIND ANY EVALUATIONS CURRENTLY SAVED
    answer "There are none!!" with "OK"
    exit mousedown
  end if
  repeat with g=1 to the number of cards of this bkgnd
    put bkgnd field "ssn" into it
    if it is varssn
```

```
      then
       --ROUTINE GOES THROUGH ALL 3 SECTION WATCHBILLS SAVED
       unlock screen
       answer "Is this the one?" with "YES" or "NO"
       if it is "YES"
       then
        exit mouseDown
       end if
      end if
     end repeat
     pop card
     answer "There are no more!!"
     unlock screen
    end if
  end if
end mousedown
** BKGND #1, BUTTON #7: training ************************************
on mouseDown
  global tempwork
  put "Status,Individual,Workcenter" into menu1
  put return & "Update Records" after menu1
  talk "training",160,115
  get HPopupMenu(menu1,0,240,236)
  if it is not zero
  then
   Put Item 1 of it into TheLine
   put Item 2 of it into TheItem
   set the hilite of background button training to false
   -- MAKE SURE VALID CHOICE
   If TheLine=0 and  TheItem is empty
   then
    exit mousedown
   end if
   --  NEW STATUS REPORT ON A INDIVIDUAL SELECTED
   If Theline=1 and Theitem=2
   then
    talk "individual status",160,115
    lock screen
    put "indtra" into tempcard
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    doMenu "Paste Card"
    unlock screen
   end if
   If Theline=1 and Theitem=3
   then
    put bkgnd field "workc" into tempwork
    talk "workcenter status",160,115
    lock screen
```

```
    put "worktra" into tempcard
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    doMenu "Paste Card"
    unlock screen
   end if
   if Theline=2 and Theitem=1
   then
    ask " Who's training record do you need?"with "111-11-1111"
    if it is not empty
    then
     lock screen
     push card
     put it into tempssn
     go to stack enlisted
     find whole tempssn of bkgnd field ssn
     if the result is not empty
     then
      pop card
      unlock screen
      answer "There is no such SSN!!"
      exit mousedown
     end if
     unlock screen
    end if
   end if
  end if
end mouseDown
** BKGND #1, BUTTON #10: leave ************************************
on mousedown
  global tempwork
  put "Status,Individual,Workcenter" into menu1
  put return & "Leave Chit" after menu1
  talk "leave",160,115
  get HPopupMenu(menu1,0,260,237)
  if it is not zero
  then
   Put Item 1 of it into TheLine
   put Item 2 of it into TheItem
   set the hilite of background button leave to false
   -- MAKE SURE VALID CHOICE
   If TheLine=0 and  TheItem is empty
   then
    exit mousedown
   end if
   --  NEW STATUS REPORT ON A INDIVIDUAL SELECTED
   If Theline=1 and Theitem=2
   then
    talk "individual status",160,115
```

```
    lock screen
    put "indleavestat" into tempcard
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    doMenu "Paste Card"
    unlock screen
   end if
   If Theline=1 and Theitem=3
   then
    put bkgnd field "workc" into tempwork
    talk "workcenter status",160,115
    lock screen
    put "workleave" into tempcard
    put bkgnd field workc into tempwork
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    doMenu "Paste Card"
    unlock screen
   end if
   if Theline=2 and Theitem=1
   then
    talk "leave chit request",160,115
    lock screen
    put "leavereq" into tempcard
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    doMenu "Paste Card"
    unlock screen
   end if
  end if
end mousedown
** BKGND #1, BUTTON #11: New Button ************************************
on mouseUp
  ask " Who's emergency data do you need?"
  if it is not empty then
   lock screen
   go to stack enlisted
   find whole it in field ename
   go next
   unlock screen
  end if
end mouseUp
** BKGND #1, BUTTON #12: New Button ************************************
on mouseUp
  show card field tickler
```

```
  repeat forever
    answer"Are you finished"with "Yes" or "No"
    if it is "Yes"
    then
      hide card field tickler
      exit mouseUp
    end if
    wait 120 seconds
  end repeat
end mouseUp
** BKGND #1, BUTTON #13: New Button ************************************
on mouseUp
  answer"This area has not been developed!"
end mouseUp
** BKGND #1, BUTTON #14: inbox *****************************************
--THIS HANDLER ALLOWS THE USER TO SEARCH THROUGH HIS/HER INBOX
-- ONE DOCUMENT AT A TIME
on mouseUp
  put bkgnd field workc into tempinworkc
  if the number of lines of bkgnd field "infield" = 0
  then
    answer "You have nothing in your INBOX!!"
    exit mouseup
  end if
  repeat with x=1 to the number of lines of bkgnd field¬
    "infield"
    get line x of bkgnd field "infield"
    go to it
    unlock screen
    answer "Is this the document?" with "Yes" or "NO"
    if it is "YES"
    then
      exit repeat
    end if
    lock screen
    go to card tempinworkc-- CARD ID FOR THIS WORKCENTER
    if x= the number of lines of bkgnd field "infield"
    then
      answer "Sorry, that is all in your INBOX!!" with "OK"
    end if
  end repeat
end mouseup
** BKGND #1, BUTTON #15: OUTBOX ***************************************
on mouseUp
  global nextin
  put bkgnd field workc into tempinworkc
  if the number of lines of bkgnd field "infield" = 0
  then
    answer "You have nothing in your OUTBOX!!"
    exit mouseup
  end if
```

```
repeat with x=1 to the number of lines of bkgnd field¬
 "infield"
 get line x of bkgnd field "infield"
 go to it
 unlock screen
 answer "Is this the document from your INBOX?" with "Yes" or "NO"
 if it is "YES"
 then
  put x into linesel
  put the ID of this card into nextin
  answer "Do you wish to send or delete this document?" with¬
  "SEND" or "DELETE" or "Cancel"
  if it is "SEND"
  then
   doMenu "Copy Card"
   ask "Who do I send it to?" with "Division Officer"
   if it is "Division Officer"
   then
    lock screen
    push card
    go to card id 2832 of stack ship2
    doMenu "Paste Card"
    go prev
    send mouseup to bkgnd field "infield"
    pop card
    unlock screen
    answer "Your division officer has the document!" with "OK"
    answer "Would you like it deleted from your inbox?" with¬
    "YES" or "NO"
    if it is "YES"
    then
     lock screen
     go to nextin
     domenu "delete card"
     go to card tempinworkc
     delete line linesel of bkgnd field "infield"
     unlock screen
    end if
   end if
  end if
  if it is "Delete"
  then
   --lock screen
   repeat forever
    go to nextin
    get bkgnd field linklist
    if it is empty
    then
     domenu "delete card"
     exit repeat
    end if
```

```
        get line 1 of bkgnd field linklist
        if the result is empty
        then
          put line 1 of bkgnd field linklist into nextcard
          domenu "delete card"
          put nextcard into nextin
        else
          exit repeat
        end if
      end repeat
      go to card id 3258
      delete line linesel of bkgnd field "infield"
      --unlock screen
    end if
  end if
  lock screen
  go to card id 3258-- CARD ID FOR THIS WORKCENTER
 end repeat
 answer "It has been deleted from your INBOX!!" with "OK"
end mouseUp
** BKGND #2, FIELD #1: Description ************************************
on mouseup
 -- this handler turns show field "description" off and
 -- show the card picture with associated buttons on.
 show card picture
 set the highlight of background btn "VOICE" to true
 set visible of field "Description" to false
 repeat with i=1 to the number of buttons
  show button i
 end repeat
 show background button "sorry"
end mouseup
** BKGND #2, FIELD #3: BUTTONS ************************************
on mouseup
 GLOBAL CARDID
 put CARDID into SECOND ITEM OF line¬
 (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
 show card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to true
 END REPEAT
end mouseup
** BKGND #2, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #2, FIELD #6: 3lworkc ************************************
```

```
** BKGND #2, FIELD #7: watchlist ************************************
--ROUTINE GRABS THE SELECTION CLICKED ON AND SENDS CONTROL TO HIDDEN
--BACKGROUND FIELD WATCHNEC
on mouseUp
  global watchname
  set lockText of bkgnd field "watchlist" to false
  put line clickline() of bkgnd field "watchlist" into WATCHNAME
  set lockText of bkgnd field "watchlist" to true
  send mouseUp to bkgnd field "watchnec"
end mouseUp
** BKGND #2, FIELD #8: watchnec ************************************
--GETS CONTROL FROM BACKGROUND FIELD WATCHNAME AND GETS THE
APPROPRIATE
--NEC FOR THE WATCHNAME SELECTED. IF THERE IS NONE A BLANK IS SENT.
--CONTROL IS THEN PASSED TO HIDDEN BUTTON NEWWATCH ON THE BLANK 3
SECTION
--UNDERWAY WATCHBILL
on mouseUp
  global tempwnec
  set lockText of bkgnd field "watchnec" to false
  put line clickline() of bkgnd field "watchnec" into tempwnec
  set lockText of bkgnd field "watchnec" to true
  hide button "select A WATCH STATION"
  pop card
  send mouseUp to bkgnd button "newwatch"
end mouseUp
** BKGND #2, BUTTON #1: VOICE ***************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #2, BUTTON #2: wdown ***************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of bkgnd field "watchlist" <2
  then exit mouseStillDown
  lock screen
  get scroll of bkgnd field "watchlist"+ textHeight of bkgnd field ¬
  "watchlist"
  set scroll of bkgnd field "watchnec" to it
  set scroll of bkgnd field "watchlist" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #3: wup *****************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
```

```
  get scroll of bkgnd field "watchlist"- textHeight of bkgnd field¬
  "watchlist"
  if it <0 then get 0
  set scroll of bkgnd field "watchnec" to it
  set scroll of bkgnd field "watchlist" to it
  unlock screen
end mouseStillDown
** CARD #2: EM01 ************************************
on opencard
  global countin
end opencard
** CARD #2, BUTTON #1: New Button ************************************
on mouseUp
  ask " Who's emergency data do you need?"with "111-11-1111"
  if it is not empty
  then
    lock screen
    push card
    put it into tempssn
    go to stack enlisted
    find whole tempssn of bkgnd field ssn
    if the result is not empty
    then
      pop card
      unlock screen
      answer "There is no such SSN!!"
      exit mouseUp
    end if
    get line 1 of bkgnd field linklist
    go to it
    unlock screen
  end if
end mouseUp
** CARD #2, BUTTON #3: watchbill ************************************
--THIS IS THE MENU SELECTION FOR THE DIFERENT TYPES OF WAYCHBILLS THAT
--NEED TO BE CREATED. AFTER A SELECTION IS MADE THE APPROPIATE BLANK
--CARDS ARE RETRIEVED FROM STACK TEMP AND PLACED IN STACK SHIP FOR USE.
on mouseDown
  put "Underway Watchbill,New,Old,Modify Watch List" into menu1
  put return & "Inport Watchbill,New,Old,Modify Watch List" after menu1
  talk "watchbill",160,115
  get HPopupMenu(menu1,0,240,141)
  if it is not zero then
    Put Item 1 of it into TheLine
    put Item 2 of it into TheItem
    set the hilite of card button watchbill to false
    -- MAKE SURE VALID CHOICE
    If TheLine=0 and  TheItem is empty
    then
      exit mousedown
    end if
```

```
-- NEW UNDERWAY WATCHBILL SELECTED
If Theline=1 and Theitem=2
then
 answer "How many sections underway?" with "3" or "4" or "5"
 if it is "3"
 then
  talk " New three section underway watchbill",160,115
  lock screen
  put "threeunderwaywatch" into tempcard
  push card
  go to card tempcard of stack temp
  doMenu "Copy Card"
  pop card
  push card
  doMenu "Paste Card"
  pop card
  put background field "workc" into workcenter
  go to card tempcard
  put workcenter into background field "3workc"
  unlock screen
 end if
 if it is "4"
 then
  talk " New four section underway watchbill",160,115
  lock screen
  put "fourunderwaywatch" into tempcard
  push card
  go to card tempcard of stack temp
  doMenu "Copy Card"
  pop card
  push card
  doMenu "Paste Card"
  pop card
  put background field "workc" into workcenter
  go to card tempcard
  put workcenter into background field "3workc"
  unlock screen
 end if
 if it is "5"
 then
  talk " New five section underway watchbill",160,115
  lock screen
  put "fiveunderwaywatch" into tempcard
  push card
  go to card tempcard of stack temp
  doMenu "Copy Card"
  pop card
  push card
  doMenu "Paste Card"
  pop card
  put background field "workc" into workcenter
```

```
    go to card tempcard
    put workcenter into background field "3workc"
    unlock screen
   end if
  end if
  --OLD UNDERWAY WATCHBILL IS SELECTED
  If Theline=1 and Theitem=3
  then
   answer "How many sections were there underway?" with "3" or "4" or "5"
   if it is "3"
   then
    talk " Old three section underway watchbill",160,115
    lock screen
    push card
    put "threeunderwaywatch" into tempcard
    go to card tempcard
    if the result is not empty
    then
     --COULDN'T FIND ANY WATCHBILLS CURRENTLY SAVED
     answer "There are none!!" with "OK"
     exit mousedown
    end if
    repeat with g=1 to the number of cards of this bkgnd
     put bkgnd field "3workc" into it
     if it is "Em01"
     then
      --ROUTINE GOES THROUGH ALL 3 SECTION WATCHBILLS SAVED
      unlock screen
      answer "Is this the one?" with "YES" or "NO"
      if it is "YES"
      then
       exit mouseDown
      end if
     end if
    end repeat
    pop card
    answer "There are no more!!"
    unlock screen
   end if
   if it is "4"
   then
    talk " Old four section underway watchbill",160,115
    lock screen
    push card
    put "fourunderwaywatch" into tempcard
    go to card tempcard
    if the result is not empty
    then
     --COULDN'T FIND ANY WATCHBILLS CURRENTLY SAVED
     answer "There are none!!" with "OK"
     exit mousedown
```

```
    end if
    repeat with g=1 to the number of cards of this bkgnd
     put bkgnd field "3workc" into it
     if it is "Em01"
     then
      --ROUTINE GOES THROUGH ALL 4 SECTION WATCHBILLS SAVED
      unlock screen
      answer "Is this the one?" with "YES" or "NO"
      if it is "YES"
      then
       exit mouseDown
      end if
     end if
    end repeat
    pop card
    answer "There are no more!!"
    unlock screen
   end if
   if it is "5"
   then
    talk " Old five section underway watchbill",160,115
    lock screen
    push card
    put "fiveunderwaywatch" into tempcard
    go to card tempcard
    if the result is not empty
    then
     --COULDN'T FIND ANY WATCHBILLS CURRENTLY SAVED
     answer "There are none!!" with "OK"
     exit mousedown
    end if
    repeat with g=1 to the number of cards of this bkgnd
     put bkgnd field "3workc" into it
     if it is "Em01"
     then
      --ROUTINE GOES THROUGH ALL 5 SECTION WATCHBILLS SAVED
      unlock screen
      answer "Is this the one?" with "YES" or "NO"
      if it is "YES"
      then
       exit mouseDown
      end if
     end if
    end repeat
    pop card
    answer "There are no more!!"
    unlock screen
   end if
  end if
   --ROUTINE GOES TO THE WATCH LIST CARD FOR THAT WORKCENTER AND
ALLOWS
```

```
--MODIFICATIONS
If Theline=1 and Theitem=4
then
  talk "modify watch list",160,115
  lock screen
  go to card id 2862
  hide card button "select a watch station"
  set visible of bkgnd field watchnec to true
  set lockText of bkgnd field "watchlist" to false
  set lockText of bkgnd field "watchnec" to false
end if
--*********************************************************
--ROUTINES FOR INPORT WATCHBILLS
If Theline=2 and Theitem=2
then
  answer "How many sections inport?" with "3" or "4" or "5"
  if it is "3"
  then
    talk " New three section inport watchbill",160,115
    lock screen
    put "threeinportwatch" into tempcard
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    push card
    doMenu "Paste Card"
    pop card
    put background field "workc" into workcenter
    go to card tempcard
    put workcenter into background field "3workc"
    unlock screen
  end if
  if it is "4"
  then
    talk " New four section inport watchbill",160,115
    lock screen
    put "fourinportwatch" into tempcard
    push card
    go to card tempcard of stack temp
    doMenu "Copy Card"
    pop card
    push card
    doMenu "Paste Card"
    pop card
    put background field "workc" into workcenter
    go to card tempcard
    put workcenter into background field "3workc"
    unlock screen
  end if
  if it is "5"
```

```
 then
  talk " New five section inport watchbill",160,115
  lock screen
  put "fiveinportwatch" into tempcard
  push card
  go to card tempcard of stack temp
  doMenu "Copy Card"
  pop card
  push card
  doMenu "Paste Card"
  pop card
  put background field "workc" into workcenter
  go to card tempcard
  put workcenter into background field "3workc"
  unlock screen
 end if
end if
--OLD INPORT WATCHBILL IS SELECTED
If Theline=2 and Theitem=3
then
 answer "How many sections were there inport?" with "3" or "4" or "5"
 if it is "3"
 then
  talk " Old three section inport watchbill",160,115
  lock screen
  push card
  put "threeinportwatch" into tempcard
  go to card tempcard
  if the result is not empty
  then
   --COULDN'T FIND ANY WATCHBILLS CURRENTLY SAVED
   answer "There are none!!" with "OK"
   exit mousedown
  end if
  repeat with g=1 to the number of cards of this bkgnd
   put bkgnd field "3workc" into it
   if it is "Em01"
   then
    --ROUTINE GOES THROUGH ALL 3 SECTION WATCHBILLS SAVED
    unlock screen
    answer "Is this the one?" with "YES" or "NO"
    if it is "YES"
    then
     exit mouseDown
    end if
   end if
  end repeat
  pop card
  answer "There are no more!!"
  unlock screen
 end if
```

```
if it is "4"
then
  talk " Old four section inport watchbill",160,115
  lock screen
  push card
  put "fourinportwatch" into tempcard
  go to card tempcard
  if the result is not empty
  then
    --COULDNT FIND ANY WATCHBILLS CURRENTLY SAVED
    answer "There are none!!" with "OK"
    exit mousedown
  end if
  repeat with g=1 to the number of cards of this bkgnd
    put bkgnd field "3workc" into it
    if it is "Em01"
    then
      --ROUTINE GOES THROUGH ALL 4 SECTION WATCHBILLS SAVED
      unlock screen
      answer "Is this the one?" with "YES" or "NO"
      if it is "YES"
      then
        exit mouseDown
      end if
    end if
  end repeat
  pop card
  answer "There are no more!!"
  unlock screen
end if
if it is "5"
then
  talk " Old five section inport watchbill",160,115
  lock screen
  push card
  put "fiveinportwatch" into tempcard
  go to card tempcard
  if the result is not empty
  then
    --COULDNT FIND ANY WATCHBILLS CURRENTLY SAVED
    answer "There are none!!" with "OK"
    exit mousedown
  end if
  repeat with g=1 to the number of cards of this bkgnd
    put bkgnd field "3workc" into it
    if it is "Em01"
    then
      --ROUTINE GOES THROUGH ALL 5 SECTION WATCHBILLS SAVED
      unlock screen
      answer "Is this the one?" with "YES" or "NO"
      if it is "YES"
```

```
        then
          exit mouseDown
        end if
       end if
      end repeat
      pop card
      answer "There are no more!!"
      unlock screen
     end if
    end if
     --ROUTINE GOES TO THE WATCH LIST CARD FOR THAT WORKCENTER AND
ALLOWS
    --MODIFICATIONS
    If Theline=2 and Theitem=4
    then
     talk "modify watch list",160,115
     lock screen
     go to card id 2862
     hide card button "select a watch station"
     set visible of bkgnd field watchnec to true
     set lockText of bkgnd field "watchlist" to false
     set lockText of bkgnd field "watchnec" to false
    end if
  end if
end mouseDown
** CARD #3: wlem01 ************************************
on openCard
  show button "select A WATCH STATION"
end openCard
**    CARD    #3,    BUTTON    #1:    SELECT    A    WATCH    STATION
************************************
--PLACE CARD FOR GUIDING THE USER TO MAKE A SELECTION
** CARD #3, BUTTON #2: New Button ************************************
-- RETURNS TO THE WORKCENTER LEVEL
on mouseUp
  lock screen
  show card button "select a watch station"
  set visible of bkgnd field watchnec to false
  set lockText of bkgnd field "watchlist" to true
  set lockText of bkgnd field "watchnec" to true
  go to card id 3258
  unlock screen
end mouseUp
** CARD #3, BUTTON #3: New Button ************************************
on mouseUp
  send mousestilldown to bkgnd button "wup"
end mouseUp
** CARD #3, BUTTON #4: New Button ************************************
on mouseUp
  send mousestilldown to bkgnd button "wdown"
end mouseUp
```

```
SCRIPTS FOR STACK: ship2
========================================================
 ** STACK SCRIPT ************************************
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
  end if
end closestack
** BKGND #1, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, FIELD #7: infield ************************************
--THIS HANDLER ADDS ONE TO INBOX COUNTER WHEN A NEW
-- DOCUMENT ARRIVES AND PUTS THE CARD ID INTO THE NEXT VACANT LINE
on mouseup
  global nextin,countin
  get line 1 of bkgnd field "infield"
  if it is empty
  then
    put 1 into countin
    put nextin into line countin of bkgnd field "infield"
  else
    add 1 to countin
```

```
    put nextin into line countin of bkgnd field "infield"
  end if
end mouseup
** BKGND #1, BUTTON #1: HELP ************************************
on mouseUp
  PLAY "HELP"
  push this card
  go to stack "ARGOS HELP"
end mouseUp
** BKGND #1, BUTTON #2: UP **************************************
on mouseUp
  -- goes up the hierarchy
  visual effect zoom out
  go to card id field "Uplink"
end mouseUp
** BKGND #1, BUTTON #3: Find ************************************
on mouseUp
  -- this handler provides for a modified search.
  put the id of this card into tempid
  PLAY "SEARCH"
  ask"Please enter Search String."
  if visible of field "Description" then
    set lockscreen to true
    set the highlight of background btn "VOICE" to false
    put "find string" && quote & it & quote && "in field Description"¬
    into msg
    hide msg
    send returnkey to hypercard
    if tempid <> id of this card then
      go recent
      set the highlight of background btn "VOICE" to true
      set lockscreen to false
    end if
  else
    hide msg
    put "find string" && quote & it & quote && "in field NOMENCLATURE" into msg
    hide msg
    send returnkey to hypercard
  end if
end mouseUp
** BKGND #1, BUTTON #4: LIBRARY *********************************
on mouseUp
  PLAY "LIBRARY"
  push card
  go to card library OF STACK "ARGOS"
end mouseUp
 ** BKGND #1, BUTTON #5: EXIT **********************************
on mouseUp
  gohome
  go home
end mouseUp
```

```
** BKGND #1, BUTTON #6: PRINT ************************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #1, BUTTON #7: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #1, BUTTON #8: New Button ********************************
on mouseUp
  go to card id 2825 of stack "personnel"
end mouseUp
** BKGND #1, BUTTON #15: leave ************************************
on mouseUp
  show button "working..."
  --lock screen
  go to stack enliisted
end mouseUp
** CARD #1, BUTTON #1: inbox **************************************
--THIS HANDLER ALLOWS THE USER TO SEARCH THROUGH HIS/HER INBOX
-- ONE DOCUMENT AT A TIME
on mouseUp
  repeat with x=1 to the number of lines of bkgnd field¬
    "infield"
    get line x of bkgnd field "infield"
    go to it
    unlock screen
    answer "Is this the document?" with "Yes" or "NO"
    if it is "YES"
    then
      exit mouseup
    end if
    lock screen
    go to card id 2832-- CARD ID FOR THIS WORKCENTER
  end repeat
  answer "Sorry, that is all in your INBOX!!" with "OK"
end mouseUp
SCRIPTS FOR STACK: ship2
============================================================
** STACK SCRIPT ***********************************
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
```

```
  end if
end closestack

** BKGND #1, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
 ** BKGND #1, FIELD #4: data ***********************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, FIELD #7: infield ************************************
--THIS HANDLER ADDS ONE TO INBOX COUNTER WHEN A NEW
-- DOCUMENT ARRIVES AND PUTS THE CARD ID INTO THE NEXT VACANT LINE
on mouseup
  global nextin,countin
  get line 1 of bkgnd field "infield"
  if it is empty
  then
    put 1 into countin
    put nextin into line countin of bkgnd field "infield"
  else
    add 1 to countin
    put nextin into line countin of bkgnd field "infield"
  end if
end mouseup
** BKGND #1, BUTTON #1: HELP ***************************************
on mouseUp
  PLAY "HELP"
```

```
  push this card
  go to stack "ARGOS HELP"
end mouseUp
 ** BKGND #1, BUTTON #2: UP ************************************
on mouseUp
  -- goes up the hierarchy
  visual effect zoom out
  go to card id field "Uplink"
end mouseUp
** BKGND #1, BUTTON #3: Find ************************************
on mouseUp
  -- this handler provides for a modified search.
  put the id of this card into tempid
  PLAY "SEARCH"
  ask"Please enter Search String."
  if visible of field "Description" then
    set lockscreen to true
    set the highlight of background btn "VOICE" to false
    put "find string" && quote & it & quote && "in field Description"¬
    into msg
    hide msg
    send returnkey to hypercard
    if tempid <> id of this card then
      go recent
      set the highlight of background btn "VOICE" to true
      set lockscreen to false
    end if
  else
    hide msg
    put "find string" && quote & it & quote && "in field NOMENCLATURE" into msg
    hide msg
    send returnkey to hypercard
  end if
end mouseUp
** BKGND #1, BUTTON #4: LIBRARY ********************************
on mouseUp
  PLAY "LIBRARY"
  push card
  go to card library OF STACK "ARGOS"
end mouseUp
** BKGND #1, BUTTON #5: EXIT ***********************************
on mouseUp
  gohome
  go home
end mouseUp
** BKGND #1, BUTTON #6: PRINT **********************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #1, BUTTON #7: VOICE **********************************
```

```
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #1, BUTTON #8: New Button ************************************
on mouseUp
  go to card id 2825 of stack "personnel"
end mouseUp
** BKGND #1, BUTTON #15: leave ***************************************
on mouseUp
  show button "working..."
  --lock screen
  go to stack enlisted
end mouseUp
** CARD #1, BUTTON #1: inbox *****************************************
--THIS HANDLER ALLOWS THE USER TO SEARCH THROUGH HIS/HER INBOX
-- ONE DOCUMENT AT A TIME
on mouseUp
  repeat with x=1 to the number of lines of bkgnd field¬
    "infield"
    get line x of bkgnd field "infield"
    go to it
    unlock screen
    answer "Is this the document?" with "Yes" or "NO"
    if it is "YES"
    then
      exit mouseup
    end if
    lock screen
    go to card id 2832-- CARD ID FOR THIS WORKCENTER
  end repeat
  answer "Sorry, that is all in your INBOX!!" with "OK"
end mouseUp
SCRIPTS FOR STACK: ship3
========================================================
 ** STACK SCRIPT ***********************************
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
  end if
end closestack
** BKGND #1, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
```

```
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ***************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR
BUTTON 12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, BUTTON #1: HELP *************************************
on mouseUp
  PLAY "HELP"
  push this card
  go to stack "ARGOS HELP"
end mouseUp
** BKGND #1, BUTTON #2: UP ***************************************
on mouseUp
  -- goes up the hierarchy
  visual effect zoom out
  go to card id field "Uplink"
end mouseUp
** BKGND #1, BUTTON #3: Find *************************************
on mouseUp
  -- this handler provides for a modified search.
  put the id of this card into tempid
  PLAY "SEARCH"
  ask"Please enter Search String."
  if visible of field "Description" then
    set lockscreen to true
    set the highlight of background btn "VOICE" to false
    put "find string" && quote & it & quote && "in field Description"¬
    into msg
    hide msg
    send returnkey to hypercard
    if tempid <> id of this card then
```

```
    go recent
    set the highlight of background btn "VOICE" to true
    set lockscreen to false
   end if
  else
   hide msg
   put "find string" && quote & it & quote && "in field NOMENCLATURE" into msg
   hide msg
   send returnkey to hypercard
  end if
end mouseUp
** BKGND #1, BUTTON #4: LIBRARY ************************************
on mouseUp
 PLAY "LIBRARY"
 push card
 go to card library OF STACK "ARGOS"
end mouseUp
** BKGND #1, BUTTON #5: EXIT ***************************************
on mouseUp
 gohome
 go home
end mouseUp
** BKGND #1, BUTTON #6: PRINT **************************************
on mouseUp
 play "PRINT"
 doMenu Print Card
end mouseUp
** BKGND #1, BUTTON #7: VOICE **************************************
on mousedown
 -- toggles voice on/off
 if the hilite of me then
  ARGOSTALK "VOICE ON"
 else
  TALK "VOICE OFF", 160, 115
 end if
end mousedown
** BKGND #1, BUTTON #8: New Button *********************************
on mouseUp
 go to card id 2825 of stack "personnel"
end mouseUp
```

APPENDIX D

```
SCRIPTS FOR STACK: temp
========================================================
** STACK SCRIPT ************************************
on closestack
  if the freesize of this stack > 0.15 * the size of this stack
  then
    doMenu"Compact Stack"
  end if
end closestack
function CLICKLINE
  return trunc(((scroll of the target)+(item 2 of the clickloc)-(item 2 of the rect of the target)) div the
textheight of the target)+1
end CLICKLINE
** BKGND #1, FIELD #1: Description ***************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #1, FIELD #3: BUTTONS ***************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ***************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, BUTTON #1: PRINT ***************************************
on mouseUp
  play "PRINT"
```

```
  doMenu Print Card
end mouseUp
** BKGND #1, BUTTON #2: GRAPHICS REWRITE
************************************
on mouseup
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set the script of button COUNT to¬
  "-- Graphic Handler may be found in this cards background"¬
  & return & "On MouseUp" & return &¬
  "GRAPHIC (number of me)" & return & "end MouseUp"
 end repeat
end mouseup
** BKGND #1, BUTTON #3: INSERT PARTNUMBER
************************************
on mouseUp
 GLOBAL BUTTONNAME
 GLOBAL CARDID
 PUT EMPTY INTO BUTTONNAME
 PUSH CARD
 ASK "INPUT PARTNUMBER"
 GO TO STACK COSAL
 FIND IT IN FIELD "PART NUMBER"
 PUT SHORT ID OF THIS CARD INTO CARDID
 POP CARD
 hide card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to false
 END REPEAT
 IF FIELD "BUTTONS" IS EMPTY THEN
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
   PUT ((short name of CARD BUTTON COUNT) & "," & COUNT¬
   & RETURN) AFTER FIELD "BUTTONS"
  END REPEAT
 END IF
 ANSWER "PLEASE SELECT BUTTON NAME"
 SET VISIBLE OF FIELD "BUTTONS" TO TRUE
end mouseUp
** BKGND #1, BUTTON #4: NONE,NONE ************************************
on mouseUp
 ANSWER "ARE YOU SURE"
 IF IT <> "OK" THEN EXIT MOUSEUP
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  PUT "NONE, NONE" INTO LINE COUNT OF FIELD "DATA"
 END REPEAT
end mouseUp
** BKGND #1, BUTTON #5: SOMETHING,NONE
************************************
on mouseUp
 ANSWER "ARE YOU SURE"
 IF IT <> "OK" THEN EXIT MOUSEUP
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
```

```
   PUT (CHAR 17 TO 25 OF LINE 4 OF THE SCRIPT OF BUTTON COUNT)¬
   & ", NONE" INTO¬
   LINE COUNT OF FIELD "DATA"
  END REPEAT
end mouseUp
** BKGND #1, BUTTON #6: New Button ************************************
on mouseUp
  pop card
end mouseUp
** BKGND #1, BUTTON #7: up ************************************--sets scrolling
fields to Date Qual position for UP
on mouseStillDown
  lock screen
  get scroll of field "Date Qual"- textHeight of field "Date Qual"
  if it <0 then get 0
  set scroll of field "Watch" to it
  set scroll of field "Date Comm" to it
  set scroll of field "Est Compl Date" to it
  set scroll of field "Prog" to it
  set scroll of field "Date Qual" to it
  unlock screen
end mouseStillDown
** BKGND #1, BUTTON #8: Down ************************************
--sets scrolling fields to Date Qual position for Down
on mouseStillDown
  if the number of lines of field "Watch" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "Date Qual"+ textHeight of field "Date Qual"
  set scroll of field "Watch" to it
  set scroll of field "Date Comm" to it
  set scroll of field "Est Compl Date" to it
  set scroll of field "Prog" to it
  set scroll of field "Date Qual" to it
  unlock screen
end mouseStillDown
** BKGND #1, BUTTON #9: New Button ************************************
on mouseup
  get line 1 of field "linklist"
  if it is empty
  then answer "No further pages for this record."
  else
    visual effect wipe up
    go to it
  end if
end mouseup
** BKGND #1, BUTTON #10: next person ************************************
on mouseUp
  lock screen
  go next
  go next
```

```
  go next
  GO NEXT
  unlock screen
end mouseUp
** BKGND #2, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #2, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #2, FIELD #4: data ***********************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THe SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #2, BUTTON #1: PRINT *************************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #2, BUTTON #2: VOICE *************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #2, BUTTON #3: New Button *********************************
on mouseUp
  pop card
```

```
  go to card id 4257
end mouseUp
** BKGND #2, BUTTON #4: cup ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to CName position for UP
on mouseStillDown
  lock screen
  get scroll of field "CName"- textHeight of field "CName"
  if it <0 then get 0
  set scroll of field "CAge" to it
  set scroll of field "CName" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #5: cdown ***********************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Name position for Down
on mouseStillDown
  if the number of lines of field "CName" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "CName"+ textHeight of field "CName"
  set scroll of field "CAge" to it
  set scroll of field "CName" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #6: dup *************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Ddate position for UP
on mouseStillDown
  lock screen
  get scroll of field "Ddate"- textHeight of field "Ddate"
  if it <0 then get 0
  set scroll of field "Dduty" to it
  set scroll of field "Dunit" to it
  set scroll of field "Ddivision" to it
  set scroll of field "Ddate" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #7: lup *************************************
```

```
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Lfrom position for UP
on mouseStillDown
  lock screen
  get scroll of field "Lfrom"- textHeight of field "Lfrom"
  if it <0 then get 0
  set scroll of field "lbal" to it
  set scroll of field "ldays" to it
  set scroll of field "ltype" to it
  set scroll of field "lto" to it
  set scroll of field "Lfrom" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #8: ddown ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Ddate position for Down
on mouseStillDown
  if the number of lines of field "Ddate" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "Ddate"+ textHeight of field "Ddate"
  set scroll of field "dunit" to it
  set scroll of field "ddivision" to it
  set scroll of field "dduty" to it
  set scroll of field "Ddate" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #9: ldown ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Lfrom position for Down
on mouseStillDown
  if the number of lines of field "Lfrom" <4
  then exit mouseStillDown
  lock screen
  get scroll of field "Lfrom"+ textHeight of field "Lfrom"
  set scroll of field "lbal" to it
  set scroll of field "ldays" to it
  set scroll of field "ltype" to it
  set scroll of field "lto" to it
```

```
  set scroll of field "Lfrom" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #10: next ************************************
on mouseup
  get line 1 of field "linklist"
  if it is empty
  then answer "No further pages for this record."
  else
    visual effect wipe up
    go to it
  end if
end mouseup
** BKGND #3, FIELD #1: Description ********************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #3, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #3, FIELD #4: data ***************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THe SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #3, BUTTON #1: PRINT *************************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #3, BUTTON #2: VOICE *************************************
on mousedown
  -- toggles voice on/off
```

```
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #3, BUTTON #3: last ************************************
on mouseUp
  get line 2 of field "linkList"
  if it is empty
  then answer "This is the first record."
  else
    visual effect wipe down
    go to it
  end if
end mouseup
** BKGND #3, BUTTON #4: mup *************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to mperiod position for UP
on mouseStillDown
  lock screen
  get scroll of field "mperiod"- textHeight of field "mperiod"
  if it <0 then get 0
  set scroll of field "madapt" to it
  set scroll of field "mbear" to it
  set scroll of field "mlead" to it
  set scroll of field "mbehav" to it
  set scroll of field "mprofess" to it
  set scroll of field "mperiod" to it
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #5: mdown ***********************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to mperiod position for Down
on mouseStillDown
  if the number of lines of field "mperiod" <3
  then exit mouseStillDown
  lock screen
  get scroll of field "mperiod"+ textHeight of field "mperiod"
  set scroll of field "madapt" to it
  set scroll of field "mbear" to it
  set scroll of field "mlead" to it
  set scroll of field "mbehav" to it
```

```
  set scroll of field "mprofess" to it
  set scroll of field "mperiod" to it
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #6: eup ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Etitle position for UP
on mouseStillDown
  lock screen
  get scroll of field "Etitle"- textHeight of field "Etitle"
  if it <0 then get 0
  set scroll of field "edate" to it
  set scroll of field "emark" to it
  set scroll of field "Etitle" to it
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #7: edown **********************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to Etitle position for Down
on mouseStillDown
  if the number of lines of field "Etitle" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "Etitle"+ textHeight of field "Etitle"
  set scroll of field "edate" to it
  set scroll of field "emark" to it
  set scroll of field "Etitle" to it
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #8: eup ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to OEtitle position for UP
on mouseStillDown
  lock screen
  get scroll of field "OEtitle"- textHeight of field "OEtitle"
  if it <0 then get 0
  set scroll of field "Oedate" to it
  set scroll of field "Oemark" to it
  set scroll of field "OEtitle" to it
```

```
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #9: eup ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets srolling fields to MEtitle position for UP
on mouseStillDown
  lock screen
  get scroll of field "MEtitle"- textHeight of field "MEtitle"
  if it <0 then get 0
  set scroll of field "Medate" to it
  set scroll of field "Memark" to it
  set scroll of field "MEtitle" to it
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #10: edown ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to MEtitle position for Down
on mouseStillDown
  if the number of lines of field "MEtitle" <4
  then exit mouseStillDown
  lock screen
  get scroll of field "MEtitle"+ textHeight of field "MEtitle"
  set scroll of field "Medate" to it
  set scroll of field "Memark" to it
  set scroll of field "MEtitle" to it
  unlock screen
end mouseStillDown
 ** BKGND #3, BUTTON #11: edown ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--sets scrolling fields to OEtitle position for Down
on mouseStillDown
  if the number of lines of field "OEtitle" <4
  then exit mouseStillDown
  lock screen
  get scroll of field "OEtitle"+ textHeight of field "OEtitle"
  set scroll of field "Oedate" to it
  set scroll of field "Oemark" to it
  set scroll of field "OEtitle" to it
  unlock screen
```

```
end mouseStillDown
** BKGND #3, BUTTON #12: pup ************************************
on mouseUp
end mouseUp
on mouseDown
 mouseStillDown
end mouseDown
--sets scrolling fields to Prate position for UP
on mouseStillDown
 lock screen
 get scroll of field "Prate"- textHeight of field "Prate"
 if it <0 then get 0
 set scroll of field "pdate" to it
 set scroll of field "Prate" to it
 unlock screen
end mouseStillDown
** BKGND #3, BUTTON #13: pdown ***********************************
on mouseUp
end mouseUp
on mouseDown
 mouseStillDown
end mouseDown
--sets scrolling fields to Prate position for Down
on mouseStillDown
 if the number of lines of field "Prate" <2
 then exit mouseStillDown
 lock screen
 get scroll of field "Prate"+ textHeight of field "Prate"
 set scroll of field "Pdate" to it
 set scroll of field "Prate" to it
 unlock screen
end mouseStillDown
** BKGND #3, BUTTON #14: New Button ***************************************
on mouseup
 get line 1 of field "linklist"
 if it is empty
 then answer "No further pages for this record."
 else
  visual effect wipe up
  go to it
 end if
end mouseup
** BKGND #4, FIELD #1: Description ***********************************
on mouseup
 -- this handler turns show field "description" off and
 -- show the card picture with associated buttons on.
 show card picture
 set the highlight of background btn "VOICE" to true
 set visible of field "Description" to false
 repeat with i=1 to the number of buttons
  show button i
```

```
  end repeat
  show background button "sorry"
end mouseup
** BKGND #4, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #4, FIELD #4: data ***************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #4, BUTTON #1: PRINT *************************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #4, BUTTON #2: VOICE *************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #4, BUTTON #3: New Button ********************************
on mouseUp
  get line 2 of field "linkList"
  if it is empty
  then answer "This is the first record."
  else
    visual effect wipe down
    go to it
  end if
end mouseUp
** BKGND #4, BUTTON #4: sup ***************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
```

```
--sets scrolling fields to Sresults position for UP
on mouseStillDown
  lock screen
  get scroll of field "Sresults"- textHeight of field "Sresults"
  if it <0 then get 0
  set scroll of field "srate" to it
  set scroll of field "sdate" to it
  set scroll of field "Sresults" to it
  unlock screen
end mouseStillDown
** BKGND #4, BUTTON #5: pdown ************************************
on mouseUp
end mouseUp
on mouseDown
  mouseStillDown
end mouseDown
--set  scrolling fields to sresults position for Down
on mouseStillDown
  if the number of lines of field "sresults" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "sresults"+ textHeight of field "sresults"
  set scroll of field "sdate" to it
  set scroll of field "srate" to it
  set scroll of field "sresults" to it
  unlock screen
end mouseStillDown
** BKGND #4, BUTTON #6: up ***********************************
on mouse
  end mouseUp
** BKGND #4, BUTTON #7: New Button ***************************************
on mouseup
  get line 1 of field "linklist"
  if it is empty
  then
    answer "Last card in this record!"
  else
    visual effect wipe up
    go to it
  end if
end mouseup
** BKGND #5, FIELD #1: Description ***************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
```

```
  show background button "sorry"
end mouseup
** BKGND #5, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #6, FIELD #4: data ***********************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOnD ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #5, BUTTON #1: PRINT *********************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #5, BUTTON #2: VOICE *********************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    ARGOSTALK "VOICE ON"
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #5, BUTTON #3: New Button ************************************
on mouseUp
  TALK "WHO IS BEING EVALUATED?", 160, 115
  ask " What is the SSN of the person you are writing an evaluation on?"
  if it is "Cancel" or it is empty then
    exit mouseUp
  else
    lock screen
    go to stack enlisted
    find whole it of field ssn
    if the result is  empty then
      put background field "Ename" into tempname
      put background field "ssn" into tempssn
      put background field "Erate" into temperate
      put background field "paygrade" into temppaygrade
      get background field "usn"
      if it is not empty
```

```
then
  put "USN" into tempbranchclass
end if
get background field "usnr"
if it is not empty
then
  put "USNR" into tempbranchclass
end if
go to line 1 of field linklist
put background field "edatepresrate" into temppresrate
put card field "edaterep" into tempedaterep
go to line 1 of field linklist
get last line  of background field "mperiod"
put it into tempmperiod
go to stack personnel
go to card "shipdefault"
put card field "coname" into tempconame
put card field "corank" into tempcorank
put card field "cotitle" into tempcotitle
put card field "cossn" into tempcossn
put card field "shipname" into tempshipname
put card field "uic" into tempuic
put card field "coaddress" into tempcoaddress
--*********************************************
-- following information must be entered by the user
--*********************************************
ask "Status:Active,Inactive,Temac or Acdutra?" with Active
put it into tempstatus
ask "When is the end of the reporting period?" with the date
put it into tempdate
answer"What is the occasion of the report?"with "Periodic" or "Transfer" or "Other"
if it is "Other"
then
  ask "Please type a short reason for Report?" with Other:
  put it into tempoccasion
end if
put it into tempoccasion
answer "What is the type of report?" with "Concurrent" or "Regular"
put it into temptype
ask "What is the person's physical readiness?" with PASSED
put it into tempphysical
ask "What is the reserve part?" with N/A
put it into tempreserve
--*************************************************
--*********************************************
-- puts information into appropriate blocks of form
--*********************************************
go to card "enleval-1" of stack ship
put tempname into background field "ename"
put tempssn into background field "ssn"
put temperate into background field "erate"
```

```
      put tempbranchclass into background field "branchclass"
      put tempmperiod into background field "fromperiod"
      put tempppresrate into background field "edatepresrate"
      put tempedaterep into background field "edaterep"
      put tempconame into background field "coname"
      put tempcorank into background field "corank"
      put tempcotitle into background field "cotitle"
      put tempcossn into background field "cossn"
      put tempshipname into background field "shipname"
      put tempuic into background field "uic"
      put tempstatus into background field "status"
      put tempdate into background field "enddate"
      put temptype into background field "type"
      put tempoccasion into background field "occasion"
      put tempphysical into background field "physical"
      put tempreserve into background field "reserve"
      put temppaygrade into background field "paygrade"
      set visible of background field "paygrade" to false
      go to line 1 of field "linklist"
      put tempcoaddress into background field "coaddress"
      go to line 2 of field "linklist"
    end if
  end if
  unlock screen
  talk "PLEASE CLICK  ON GRADE",155,115
end mouseUp
** BKGND #5, BUTTON #4: New Button ************************************
on mouseup
  get line 1 of field "linklist"
  if it is empty
  then answer "No further pages for this record."
  else
    visual effect wipe up
    go to it
  end if
end mouseup
** BKGND #5, BUTTON #5: New Button ************************************
on mouseUp
  global nextin
  answer "Would you like to save this document?" with "OK" or "Cancel"
  if it is "OK"
  then
    lock screen
    put the ID of this card into nextin
    pop card
    send mouseup to bkgnd field "infield"
    TALK "RETURN TO WORKCENTER", 160,115
    unlock screen
    exit mouseUP
  end if
end mouseUp
```

```
** BKGND #6, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #6, FIELD #3: BUTTONS ***************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #6, FIELD #4: data ******************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #6, BUTTON #1: GRAPHICS REWRITE
************************************
on mouseup
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set the script of button COUNT to¬
    "-- Graphic Handler may be found in this cards background"¬
    & return & "On MouseUp" & return &¬
    "GRAPHIC (number of me)" & return & "end MouseUp"
  end repeat
end mouseup
** BKGND #6, BUTTON #2: INSERT PARTNUMBER
************************************
on mouseUp
  GLOBAL BUTTONNAME
  GLOBAL CARDID
  PUT EMPTY INTO BUTTONNAME
  PUSH CARD
  ASK "INPUT PARTNUMBER"
  GO TO STACK COSAL
  FIND IT IN FIELD "PART NUMBER"
  PUT SHORT ID OF THIS CARD INTO CARDID
```

```
  POP CARD
  hide card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to false
  END REPEAT
  IF FIELD "BUTTONS" IS EMPTY THEN
    REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
      PUT ((short name of CARD BUTTON COUNT) & "," & COUNT¬
      & RETURN) AFTER FIELD "BUTTONS"
    END REPEAT
  END IF
  ANSWER "PLEASE SELECT BUTTON NAME"
  SET VISIBLE OF FIELD "BUTTONS" TO TRUE
end mouseUp
** BKGND #6, BUTTON #3: NONE,NONE ************************************
on mouseUp
  ANSWER "ARE YOU SURE"
  IF IT <> "OK" THEN EXIT MOUSEUP
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    PUT "NONE, NONE" INTO LINE COUNT OF FIELD "DATA"
  END REPEAT
end mouseUp
** BKGND #6, BUTTON #4: SOMETHING,NONE
************************************
on mouseUp
  ANSWER "ARE YOU SURE"
  IF IT <> "OK" THEN EXIT MOUSEUP
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    PUT (CHAR 17 TO 25 OF LINE 4 OF THE SCRIPT OF BUTTON COUNT)¬
    & ", NONE" INTO¬
    LINE COUNT OF FIELD "DATA"
  END REPEAT
end mouseUp
** BKGND #7, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #7, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
```

```
 show card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to true
 END REPEAT
end mouseup
** BKGND #7, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #7, FIELD #20: listname ***************************************
on mouseUp
 global watchname,i,m,nextin
 set lockText of bkgnd field "listname" to false
 put line clickline() of bkgnd field "listname" into realNAME
 set lockText of bkgnd field "listname" to true
 add 1 to m
 --BRANCHES INTO SELECTION FOR WATCHES
 put "point-" & m into pointer
 put "point-" & m-1 into pointerlast
 if m < 3
 then
  show button pointer
  hide button pointerlast
 else
  hide button pointerlast
 end if
 lock screen
 put "3wsta-" & m into tempfield
 put watchname into line i of bkgnd field tempfield
 push card
 go to stack enlisted
 find  whole realname of bkgnd field "ename"
 put background field "erate" into temprate
 pop card
 put "3wname-" & m into namefield
 put "3wrate-" & m into ratefield
 put realname into line i of bkgnd field namefield
 put temprate into line i of bkgnd field ratefield
 unlock screen
 if m=3
 then
  answer "Add another watch station?" with "OK" or "Cancel"
  if it = "OK"
  then
   put 0 into m
   add 1 to i
   hide bkgnd field listname
   hide button "choose a name!"
```

```
      push card
      put bkgnd field "3workc" into tempwork
      go to card "wl"& tempwork
      exit mouseUP
      unlock screen
    else
      put 0 into m
      put 0 into i
      hide bkgnd field listname
      hide button "choose a name!"
      answer "Would you like to save this document?" with "OK" or "Cancel"
      if it is "OK"
      then
        lock screen
        put the ID of this card into nextin
        put bkgnd field "3workc" into tempwork
        go to card tempwork
        send mouseup to bkgnd field "infield"
        unlock screen
        exit mouseUP
      end if
    end if
    unlock screen
  end if
  unlock screen
end mouseUp
** BKGND #7, BUTTON #1: PRINT ************************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
** BKGND #7, BUTTON #2: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #7, BUTTON #3: wup **************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "3wsta-1"- textHeight of field "3wsta-1"
  if it <0 then get 0
  set scroll of field "3wname-1" to it
  set scroll of field "3wrate-1" to it
  set scroll of field "3wsta-1" to it
  unlock screen
end mouseStillDown
```

```
** BKGND #7, BUTTON #4: wdown ************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "3wsta-1" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "3wsta-1"+ textHeight of field "3wsta-1"
  set scroll of field "3wname-1" to it
  set scroll of field "3wrate-1" to it
  set scroll of field "3wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #7, BUTTON #5: wup ************************************
-ets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "3wsta-2"- textHeight of field "3wsta-2"
  if it <0 then get 0
  set scroll of field "3wname-2" to it
  set scroll of field "3wrate-2" to it
  set scroll of field "3wsta-2" to it
  unlock screen
end mouseStillDown
** BKGND #7, BUTTON #6: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "3wsta-3"- textHeight of field "3wsta-3"
  if it <0 then get 0
  set scroll of field "3wname-3" to it
  set scroll of field "3wrate-3" to it
  set scroll of field "3wsta-3" to it
  unlock screen
end mouseStillDown
** BKGND #7, BUTTON #7: wdown **********************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "3wsta-2" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "3wsta-2"+ textHeight of field "3wsta-2"
  set scroll of field "3wname-2" to it
  set scroll of field "3wrate-2" to it
  set scroll of field "3wsta-2" to it
  unlock screen
end mouseStillDown
** BKGND #7, BUTTON #8: wdown **********************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "3wsta-3" <2
  then exit mouseStillDown
```

```
  lock screen
  get scroll of field "3wsta-3"+ textHeight of field "3wsta-3"
  set scroll of field "3wname-3" to it
  set scroll of field "3wrate-3" to it
  set scroll of field "3wsta-3" to it
  unlock screen
end mouseStillDown
** BKGND #7, BUTTON #9: fordate ************************************
on mouseUp
  --GETS THE DATE FOR THE START OF THE WATCHBILL
  Ask "What is the beginning date of the watchbill" with the date
  if it is empty
  then
    exit mouseUp
  else
    put it into background field "fordate"
  end if
end mouseUp
** BKGND #7, BUTTON #10: todate ************************************
on mouseUp
  --GETS THE DATE FOR THE START OF THE WATCHBILL
  Ask "What is the ending date of the watchbill" with the date
  if it is empty
  then
    exit mouseUp
  else
    put it into background field "todate"
  end if
end mouseUp
** BKGND #7, BUTTON #11: New Button ********************************
on mouseUp
  global i
  put 1 into i
  push card
  put bkgnd field "3workc" into searwatch
  go to card "wl"& searwatch
end mouseUp
** BKGND #7, BUTTON #12: newwatch ***********************************
on mouseUp
  global watchnum,tempwnec, watchname,i,m
  lock screen
  push card
  go to stack enlisted
  if tempwnec is not empty
  then
    sort descending by field "nec"
    put 0 into counter
    repeat forever
      find whole tempwnec of bkgnd field nec
      if the result is empty
      then
```

```
      put background field "ename" into tempname
      go next
      get the number of card
      put it into tempid
      pop card
      if tempname is in bkgnd field "listname"
      then
        put 0 into m
        set visible of field "listname" to true
        show button "Choose a name!"
        put "point-" & m into pointer
        show button pointer
        unlock screen
        exit repeat
      end if
      add  1 to counter
      set lockText of bkgnd field "listname" to false
      put tempname into line counter of background field "listname"
      set lockText of bkgnd field "listname" to true
      push card
      go to stack enlisted
      go to card tempid
    else
      go next
    end if
  end repeat
 else
  sort descending by field "watch"
  put 0 into counter
  repeat forever
    find whole watchname of bkgnd field watch
    if the result is empty
    then
      get the mouseLoc
      click at it
      put the scroll of bkgnd field watch into myvar
      put trunc(((myvar)+(item 2 of the clickloc)-(item 2 of the rect of bkgnd field "watch")) div the
textheight of bkgnd field "watch")+1
      hide menubar
      if the result is empty
      then
        put background field "ename" into tempname
        go next
        get the number of card
        put it into tempid
        pop card
        if tempname is in bkgnd field "listname"
        then
          put 0 into m
          set visible of field "listname" to true
          show button "Choose a name!"
```

```
        unlock screen
        exit repeat
       end if
      end if
      add  1 to counter
      set lockText of bkgnd field "listname" to false
      put tempname into line counter of background field "listname"
      set lockText of bkgnd field "listname" to true
      push card
      go to stack enlisted
      go to card tempid
     else
      go next
     end if
    end repeat
  end if
end mouseUp
** BKGND #8, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
   show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #8, FIELD #3: BUTTONS ***************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
   set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #8, FIELD #4: data ******************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #8, FIELD #7: watchlist *************************************
on mouseUp
  global watchname
  set lockText of bkgnd field "watchlist" to false
```

```
  put line clickline() of bkgnd field "watchlist" into WATCHNAME
  set lockText of bkgnd field "watchlist" to true
  send mouseUp to bkgnd field "watchnec"
end mouseUp
** BKGND #8, FIELD #8: watchnec ************************************
on mouseUp
  global tempwnec
  set lockText of bkgnd field "watchnec" to false
  put line clickline() of bkgnd field "watchnec" into tempwnec
  set lockText of bkgnd field "watchnec" to true
  hide button "select A WATCH STATION"
  pop card
  send mouseUp to bkgnd button "newwatch"
end mouseUp
** BKGND #8, BUTTON #1: VOICE ***************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #8, BUTTON #2: wdown ***************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of bkgnd field "watchname" <2
  then exit mouseStillDown
  lock screen
  get scroll of bkgnd field "watchname"+ textHeight of bkgnd field "watchname"
  set scroll of bkgnd field "watchnec" to it
  set scroll of bkgnd field "watchname" to it
  unlock screen
end mouseStillDown
** BKGND #8, BUTTON #3: wup *****************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of bkgnd field "watchname"- textHeight of bkgnd field "watchname"
  if it <0 then get 0
  set scroll of bkgnd field "watchnec" to it
  set scroll of bkgnd field "watchname" to it
  unlock screen
end mouseStillDown
** BKGND #9, FIELD #1: Description **********************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
```

```
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #9, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #9, FIELD #4: data ***********************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #9, FIELD #23: listname ************************************
--GRABS THE PERSON THE USER HAS SELECTED AND GETS THE PERSON'S RATE
AND
--THEN PUTS IT INTO THE NEXT OPEN WATCH SECTION
on mouseUp
  global watchname,i,m,nextin
  set lockText of bkgnd field "listname" to false
  put line clickline() of bkgnd field "listname" into realNAME
  set lockText of bkgnd field "listname" to true
  add 1 to m
  --BRANCHES INTO SELECTION FOR WATCHES
  put "point-" & m into pointer
  put "point-" & m-1 into pointerlast
  --THIS TOGGLES THE ARROW BUTTONS
  if m < 4
  then
    show button pointer
    hide button pointerlast
  else
    hide button pointerlast
  end if
  lock screen
  put "4wsta-" & m into tempfield
  put watchname into line i of bkgnd field tempfield
  push card
  go to stack enlisted
  find  whole realname of bkgnd field "ename"
  put background field "erate" into temprate
```

```
 pop card
 put "4wname-" & m into namefield
 put "4wrate-" & m into ratefield
 put realname into line i of bkgnd field namefield
 put temprate into line i of bkgnd field ratefield
 unlock screen
  --COMPLETED ALL FOUR SECTIONS AND SEES IF ANOTHER WATCHSTATION IS
REQUIRED
 if m=4
 then
   answer "Add another watch station?" with "OK" or "Cancel"
   if it = "OK"
   then
     put 0 into m
     add 1 to i
     hide bkgnd field listname
     hide button "choose a name!"
     push card
     put bkgnd field "3workc" into tempwork
     go to card "wl"& tempwork
     exit mouseUP
     unlock screen
   else
     --ROUTINE SAVES THE DOCUMENT IN STACK SHIP AND PUTS THE CARD ID
     --INTO THE WORKCENTER'S INBOX
     put 0 into m
     put 0 into i
     hide bkgnd field listname
     hide button "choose a name!"
     answer "Would you like to save this document?" with "OK" or "Cancel"
     if it is "OK"
     then
       lock screen
       put the ID of this card into nextin
       put bkgnd field "3workc" into tempwork
       go to card tempwork
       send mouseup to bkgnd field "infield"
       unlock screen
       exit mouseUP
     end if
   end if
   unlock screen
 end if
 unlock screen
end mouseUp
** BKGND #9, BUTTON #1: PRINT ************************************
on mouseUp
 play "PRINT"
 doMenu Print Card
end mouseUp
** BKGND #9, BUTTON #2: VOICE ************************************
```

```
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
***BKGND #9, BUTTON #3: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "4wsta-1"- textHeight of field "4wsta-1"
  if it <0 then get 0
  set scroll of field "4wname-1" to it
  set scroll of field "4wrate-1" to it
  set scroll of field "4wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #9, BUTTON #4: wdown ************************************
--sets scrolling fields to Watch stationsition for Down
on mouseStillDown
  if the number of lines of field "4wsta-1" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "4wsta-1"+ textHeight of field "4wsta-1"
  set scroll of field "4wname-1" to it
  set scroll of field "4wrate-1" to it
  set scroll of field "4wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #9, BUTTON #5: fordate ************************************
on mouseUp
  --GETS THE DATE FOR THE START OF THE WATCHBILL
  Ask "What is the beginning date of the watchbill" with the date
  if it is empty
  then
    exit mouseUp
  else
    put it into background field "fordate"
  end if
end mouseUp
** BKGND #9, BUTTON #6: todate ************************************
on mouseUp
  --GETS THE DATE FOR THE START OF THE WATCHBILL
  Ask "What is the ending date of the watchbill" with the date
  if it is empty
  then
    exit mouseUp
  else
    put it into background field "todate"
```

```
  end if
end mouseUp
** BKGND #9, BUTTON #7: New Button ************************************
on mouseUp
  global i
  put 1 into i
  push card
  put bkgnd field "3workc" into searwatch
  go to card "wl"& searwatch
end mouseUp
** BKGND #9, BUTTON #8: newwatch ***************************************
--THIS ROUTINE GETS THE WATCH NEC OR WATCHNAME FROM THE WATCHLIST
CARD
--AND GOES TO STACK ENLISTED AND SEARCHES FOR THE PERSON WITH THE NEC
OR
--THE WATCH QUALIFICATION AND PUTS THEM INTO BACKGROUND FIELD
LISTNAME
--TO BE SHOWN UPON A COMPLETE SEARCH OF ENLISTED
on mouseUp
  global watchnum,tempwnec, watchname,i,m
  lock screen
  push card
  go to stack enlisted
  if tempwnec is not empty
  --ROUTINE DOES THE SEARCH BASED ON THE NEC
  then
    sort descending by field "nec"
    put 0 into counter
    repeat forever
      find whole tempwnec of bkgnd field nec
      if the result is empty
      then
        put background field "ename" into tempname
        go next
        get the number of card
        put it into tempid
        pop card
        --THIS TRAPS THE SEARCH SO THAT IT ONLY GOES THROUGH STACK
        --ENLISTED ONCE AND THEN DISPALYS THE LIST OF NAMES
        if tempname is in bkgnd field "listname"
        then
          put 0 into m
          set visible of field "listname" to true
          show button "Choose a name!"
          put "point-" & m into pointer
          show button pointer
          unlock screen
          exit repeat
        end if
        add  1 to counter
        set lockText of bkgnd field "listname" to false
```

```
    put tempname into line counter of background field "listname"
    set lockText of bkgnd field "listname" to true
    push card
    go to stack enlisted
    go to card tempid
   else
    go next
   end if
  end repeat
  --ROUTINE DOES THE SEARCH IF NO NEC IS REQUIRED ONLY QUALIFICATION
else
  sort descending by field "watch"
  put 0 into counter
  repeat forever
   find whole watchname of bkgnd field watch
   if the result is empty
   then
    get the mouseLoc
    click at it
    put the scroll of bkgnd field watch into myvar
    put trunc(((myvar)+(item 2 of the clickloc)-¬
    (item 2 of the rect of bkgnd field "watch"))-¬
    div the textheight of bkgnd field "watch")+1
    hide msg
    if the result is empty
    then
     put background field "ename" into tempname
     go next
     get the number of card
     put it into tempid
     pop card
     --THIS TRAPS THE SEARCH SO THAT IT ONLY GOES THROUGH STACK
     --ENLISTED ONCE AND THEN DISPALYS THE LIST OF NAMES
     if tempname is in bkgnd field "listname"
     then
      put 0 into m
      set visible of field "listname" to true
      show button "Choose a name!"
      unlock screen
      exit repeat
     end if
    end if
    add  1 to counter
    set lockText of bkgnd field "listname" to false
    put tempname into line counter of background field "listname"
    set lockText of bkgnd field "listname" to true
    push card
    go to stack enlisted
    go to card tempid
   else
    go next
```

```
    end if
   end repeat
  end if
end mouseUp
** BKGND #10, FIELD #1: Description ************************************
on mouseup
 -- this handler turns show field "description" off and
 -- show the card picture with associated buttons on.
 show card picture
 set the highlight of background btn "VOICE" to true
 set visible of field "Description" to false
 repeat with i=1 to the number of buttons
  show button i
 end repeat
 show background button "sorry"
end mouseup
** BKGND #10, FIELD #3: BUTTONS ****************************************
on mouseup
 GLOBAL CARDID
 put CARDID into SECOND ITEM OF line¬
 (clickline()) of field "DATA"
 SET  VISIBLE OF FIELD "BUTTONS" TO FALSE
 show card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to true
 END REPEAT
end mouseup
** BKGND #10, FIELD #4: data *******************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #10, FIELD #23: listname **************************************
--GRABS THE PERSON THE USER HAS SELECTED AND GETS THE PERSON'S RATE
AND
--THEN PUTS IT INTO THE NEXT OPEN WATCH SECTION
on mouseUp
 global watchname,i,m,nextin
 set lockText of bkgnd field "listname" to false
 put line clickline() of bkgnd field "listname" into realNAME
 set lockText of bkgnd field "listname" to true
 add 1 to m
 --BRANCHES INTO SELECTION FOR WATCHES
 put "point-" & m into pointer
 put "point-" & m-1 into pointerlast
 --THIS TOGGLES THE ARROW BUTTONS
 if m < 5
 then
  show button pointer
```

```
  hide button pointerlast
 else
  hide button pointerlast
 end if
 lock screen
 put "5wsta-" & m into tempfield
 put watchname into line i of bkgnd field tempfield
 push card
 go to stack enlisted
 find  whole realname of bkgnd field "ename"
 put background field "erate" into temprate
 pop card
 put "5wname-" & m into namefield
 put "5wrate-" & m into ratefield
 put realname into line i of bkgnd field namefield
 put temprate into line i of bkgnd field ratefield
 unlock screen
  --COMPLETED ALL FOUR SECTIONS AND SEES IF ANOTHER WATCHSTATION IS
REQUIRED
 if m=5
 then
  answer "Add another watch station?" with "OK" or "Cancel"
  if it = "OK"
  then
   put 0 into m
   add 1 to i
   hide bkgnd field listname
   hide button "choose a name!"
   push card
   put bkgnd field "3workc" into tempwork
   go to card "wl"& tempwork
   exit mouseUP
   unlock screen
  else
   --ROUTINE SAVES THE DOCUMENT IN STACK SHIP AND PUTS THE CARD ID
   --INTO THE WORKCENTER'S INBOX
   put 0 into m
   put 0 into i
   hide bkgnd field listname
   hide button "choose a name!"
   answer "Would you like to save this document?" with "OK" or "Cancel"
   if it is "OK"
   then
    lock screen
    put the ID of this card into nextin
    put bkgnd field "3workc" into tempwork
    go to card tempwork
    send mouseup to bkgnd field "infield"
    unlock screen
    exit mouseUP
   end if
```

```
   end if
   unlock screen
  end if
  unlock screen
end mouseUp
** BKGND #10, BUTTON #1: PRINT ***********************************
on mouseUp
  play "PRINT"
  doMenu Print Card
end mouseUp
 * BKGND #10, BUTTON #2: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #10, BUTTON #3: wup **************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-1"- textHeight of field "5wsta-1"
  if it <0 then get 0
  set scroll of field "5wname-1" to it
  set scroll of field "5wrate-1" to it
  set scroll of field "5wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #10, BUTTON #4: wdown ************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-1" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-1"+ textHeight of field "5wsta-1"
  set scroll of field "5wname-1" to it
  set scroll of field "5wrate-1" to it
  set scroll of field "5wsta-1" to it
  unlock screen
end mouseStillDown
** BKGND #10, BUTTON #5: wup **************************************
--sts scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-2"- textHeight of field "55wsta-2"
  if it <0 then get 0
  set scroll of field "5wname-2" to it
  set scroll of field "5wrate-2" to it
  set scroll of field "5wsta-2" to it
```

```
  unlock screen
end mouseStillDown
** BKGND #10, BUTTON #6: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-3"- textHeight of field "5wsta-3"
  if it <0 then get 0
  set scroll of field "5wname-3" to it
  set scroll of field "5wrate-3" to it
  set scroll of field "5wsta-3" to it
  unlock screen
end mouseStillDown
 ** BKGND #10, BUTTON #7: wdown ***********************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-2" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-2"+ textHeight of field "5wsta-2"
  set scroll of field "5wname-2" to it
  set scroll of field "5wrate-2" to it
  set scroll of field "5wsta-2" to it
  unlock screen
end mouseStillDown
** BKGND #10, BUTTON #8: wdown ************************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
  if the number of lines of field "5wsta-3" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "5wsta-3"+ textHeight of field "5wsta-3"
  set scroll of field "5wname-3" to it
  set scroll of field "5wrate-3" to it
  set scroll of field "5wsta-3" to it
  unlock screen
end mouseStillDown
** BKGND #10, BUTTON #9: fordate **********************************
on mouseUp
  --GETS THE DATE FOR THE START OF THE WATCHBILL
  Ask "What is the beginning date of the watchbill" with the date
  if it is empty
  then
    exit mouseUp
  else
    put it into background field "fordate"
  end if
end mouseUp
** BKGND #10, BUTTON #10: todate **********************************
on mouseUp
  --GETS THE DATE FOR THE START OF THE WATCHBILL
```

```
 Ask "What is the ending date of the watchbill" with the date
 if it is empty
 then
  exit mouseUp
 else
  put it into background field "todate"
 end if
end mouseUp
** BKGND #10, BUTTON #11: New Button **********************************
on mouseUp
 global i
 put 1 into i
 push card
 put bkgnd field "3workc" into searwatch
 go to card "wl"& searwatch
end mouseUp
** BKGND #10, BUTTON #12: newwatch *************************************
--THIS ROUTINE GETS THE WATCH NEC OR WATCHNAME FROM THE WATCHLIST
CARD
--AND GOES TO STACK ENLISTED AND SEARCHES FOR THE PERSON WITH THE NEC
OR
--THE WATCH QUALIFICATION AND PUTS THEM INTO BACKGROUND FIELD
LISTNAME
--TO BE SHOWN UPON A COMPLETE SEARCH OF ENLISTED
on mouseUp
 global watchnum,tempwnec, watchname,i,m
 lock screen
 push card
 go to stack enlisted
 if tempwnec is not empty
 --ROUTINE DOES THE SEARCH BASED ON THE NEC
 then
  sort descending by field "nec"
  put 0 into counter
  repeat forever
   find whole tempwnec of bkgnd field nec
   if the result is empty
   then
    put background field "ename" into tempname
    go next
    get the number of card
    put it into tempid
    pop card
    --THIS TRAPS THE SEARCH SO THAT IT ONLY GOES THROUGH STACK
    --ENLISTED ONCE AND THEN DISPALYS THE LIST OF NAMES
    if tempname is in bkgnd field "listname"
    then
     put 0 into m
     set visible of field "listname" to true
     show button "Choose a name!"
     put "point-" & m into pointer
```

```
        show button pointer
        unlock screen
        exit repeat
      end if
      add  1 to counter
      set lockText of bkgnd field "listname" to false
      put tempname into line counter of background field "listname"
      set lockText of bkgnd field "listname" to true
      push card
      go to stack enlisted
      go to card tempid
    else
      go next
    end if
  end repeat
  --ROUTINE DOES THE SEARCH IF NO NEC IS REQUIRED ONLY QUALIFICATION
 else
  sort descending by field "watch"
  put 0 into counter
  repeat forever
    find whole watchname of bkgnd field watch
    if the result is empty
    then
      get the mouseLoc
      click at it
      put the scroll of bkgnd field watch into myvar
      put trunc(((myvar)+(item 2 of the clickloc)-(item 2 of the rect of bkgnd field "watch")) div the
textheight of bkgnd field "watch")+1
      hide message
      if the result is empty
      then
        put background field "ename" into tempname
        go next
        get the number of card
        put it into tempid
        pop card
        --THIS TRAPS THE SEARCH SO THAT IT ONLY GOES THROUGH STACK
        --ENLISTED ONCE AND THEN DISPALYS THE LIST OF NAMES
        if tempname is in bkgnd field "listname"
        then
          put 0 into m
          set visible of field "listname" to true
          show button "Choose a name!"
          unlock screen
          exit repeat
        end if
      end if
      add  1 to counter
      set lockText of bkgnd field "listname" to false
      put tempname into line counter of background field "listname"
      set lockText of bkgnd field "listname" to true
```

```
      push card
      go to stack enlisted
      go to card tempid
     else
      go next
     end if
   end repeat
  end if
end mouseUp
** BKGND #10, BUTTON #13: wup ************************************
--sets scrolling fields to Watch station position for UP
on mouseStillDown
  lock screen
  get scroll of field "5wsta-4"- textHeight of field "5wsta-444"
  if it <0 then get 0
  set scroll of field "5wname-4" to it
  set scroll of field "5wrate-4" to it
  set scroll of field "5wsta-4" to it
  unlock screen
end mouseStillDowN
** BKGND #1, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"

  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #1, FIELD #4: data ***************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #1, FIELD #8: listname **********************************
--GRABS THE PERSON THE USER HAS SELECTED AND GETS THE PERSON'S RATE
AND
--THEN PUTS IT INTO THE NEXT OPEN WATCH SECTION
on mouseUp
  global watchname,i,m,nextin
  set lockText of bkgnd field "listname" to false
  put line clickline() of bkgnd field "listname" into realNAME
  set lockText of bkgnd field "listname" to true
  add 1 to m
  --BRANCHES INTO SELECTION FOR WATCHES
  put "point-" & m into pointer
```

```
put "point-" & m-1 into pointerlast
--THIS TOGGLES THE ARROW BUTTONS
if m < 5
then
  show button pointer
  hide button pointerlast
else
  hide button pointerlast
end if
lock screen
put "5wsta-" & m into tempfield
put watchname into line i of bkgnd field tempfield
push card
go to stack enlisted
find  whole realname of bkgnd field "ename"
put background field "erate" into temprate
pop card
put "5wname-" & m into namefield
put "5wrate-" & m into ratefield
put realname into line i of bkgnd field namefield
put temprate into line i of bkgnd field ratefield
unlock screen
 --COMPLETED ALL FOUR SECTIONS AND SEES IF ANOTHER WATCHSTATION IS
REQUIRED
if m=5
then
  answer "Add another watch station?" with "OK" or "Cancel"
  if it = "OK"
  then
    put 0 into m
    add 1 to i
    hide bkgnd field listname
    hide button "choose a name!"
    push card
    go to card id 2862
    exit mouseUP
    unlock screen
  else
    --ROUTINE SAVES THE DOCUMENT IN STACK SHIP AND PUTS THE CARD ID
    --INTO THE WORKCENTER'S INBOX
    put 0 into m
    put 0 into i
    hide bkgnd field listname
    hide button "choose a name!"
    answer "Would you like to save this document?" with "OK" or "Cancel"
    if it is "OK"
    then
      lock screen
      put the ID of this card into nextin
      go to card id 3258
      send mouseup to bkgnd field "infield"
```

```
      unlock screen
      exit mouseUP
     end if
    end if
    unlock screen
  end if
  unlock screen
end mouseUp
** BKGND #1, BUTTON #1: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #1, BUTTON #2: New Button ********************************
on mouseUp
  global nextin
  answer "Would you like to save this document?" with "OK" or "DELETE"
  if it is "OK"
  then
    lock screen
    put the ID of this card into nextin
    go prev
    send mouseup to bkgnd field "infield"
    TALK "RETURN TO WORKCENTER", 160,115
    unlock screen
    exit mouseUP
  end if
  if it is "delete"
  then
    lock screen
    Domenu "Delete card"
    go prev
    unlock screen
  end if
end mouseUp
** BKGND #2, FIELD #1: Description ********************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
```

```
** BKGND #2, FIELD #3: BUTTONS ************************************
on mouseup
 GLOBAL CARDID
 put CARDID into SECOND ITEM OF line¬
 (clickline()) of field "DATA"
 SET VISIBLE OF FIELD "BUTTONS" TO FALSE
 show card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to true
 END REPEAT
end mouseup
** BKGND #2, FIELD #4: data ***********************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #2, BUTTON #1: VOICE *********************************
on mousedown
 -- toggles voice on/off
 if the hilite of me then
  TALK "VOICE ON", 160, 115
 else
  TALK "VOICE OFF", 160, 115
 end if
end mousedown
** BKGND #2, BUTTON #2: New Button ************************************
--SAVES DOCUMENT TO INBOX OR DELETES IT
on mouseUp
 global nextin
 answer "Would you like to save this document?" with "OK" or "Cancel"
 if it is "OK"
 then
  lock screen
  put the ID of this card into nextin
  go prev
  send mouseup to bkgnd field "infield"
  TALK "RETURN TO WORKCENTER", 160,115
  unlock screen
  exit mouseUP
 ELSE
  lock screen
  DOmenu "delete card"
  go prev
  unlock screen
 end if
end mouseUp
** BKGND #2, BUTTON #3: workstatustra **********************************
--BUTTON SEARCHES STACK ENLISTED FOR THE WORKCENTER AND THEN
EVALUATES
```

```
--WHETHER OR NOT THE PERSON IS ON LEAVE
on mouseUp
  global tempwork
  put 0 into z
  put 0 into w
  put 0 into testcard
  put 0 into tempid
  put the date into todaydate
  lock screen
  push card
  --SORTS STACK ENLISTED ACCORDING TO WORKCENTER
  go to stack enlisted
  sort descending by field "workcenter"
  put 0 into counter
  repeat forever
    get bkgnd field workcenter
    if it is empty
    then
      exit repeat
    end if
    --TESTS IF THIS CARD HAS THE APPROPIATE WORKCENTER
    put bkgnd field workcenter into testwork
    if testwork is tempwork
    then
      add 1 to w
      put 1 into gotone
      put bkgnd field "ename" into tempname
      go to line 1 of bkgnd field linklist
      --TESTS THE LEAVE STATUS
      repeat with y =1 to the number of lines in bkgnd field lfrom
        get line y of bkgnd field "lto"
        if it is not empty
        then
          --MAKES SURE ON LEAVE CURRENTLY
          put line y of bkgnd field "lto" into testdate
          convert testdate to seconds
          convert todaydate to seconds
          if todaydate <= testdate
          then
            if gotone = 1
            then
              add 1 to z
            end if
            --IF ON LEAVE THEN STORES INFO FOR USE
            put line y of bkgnd field "lfrom" into templfrom
            put line y of bkgnd field "ltype" into templtype
            get the number of card
            put it into tempid
            pop card
            add  1 to counter
            convert testdate to short date
```

```
        --PUTS INFO ONTO STATUS CARD
        put tempname into line counter of bkgnd field "leaveper"
        put testdate into line counter of bkgnd field "leaveto"
        put templfrom into line counter of bkgnd field "leavefrom"
        put templtype into line counter of bkgnd field "leavetype"
        push card
        --GOES BACK FOR ANOTHER PERSON
        go to stack enlisted
        go to card tempid
        put 0 into gotone
       end if
      end if
     end repeat
     --RETURNS TO THE FIRST PAGE OF A PERSONS RECORD
     go to line 2 of bkgnd field linklist
    end if
    go next
  end repeat
  go to stack ship
  go to card workleave
  --PUTS FINAL INFO ON STATUS CARD AND COMPUTES STATISTICS
  put tempwork into bkgnd field leavework
  put w into bkgnd field totpers
  put z into bkgnd field totpersleave
  put round((z/w)*100) into bkgnd field percpersleave
  unlock screen
end mouseUp
** BKGND #2, BUTTON #4: wdown ************************************
--sets scrolling fields to personnel on leave for Down
on mouseStillDown
  if the number of lines of field "leaveper" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "leaveper"+ textHeight of field "leaveper"
  set scroll of field "leavefrom" to it
  set scroll of field "leaveto" to it
  set scroll of field "leavetype" to it
  set scroll of field "leaveper" to it
  unlock screen
end mouseStillDown
** BKGND #2, BUTTON #5: wup **************************************
--sets scrolling fields to personnel on leave position for UP
on mouseStillDown
  lock screen
  get scroll of field "leaveper"- textHeight of field "leaveper"
  if it <0 then get 0
  set scroll of field "leavefrom" to it
  set scroll of field "leaveto" to it
  set scroll of field "leavetype" to it
  set scroll of field "leaveper" to it
  unlock screen
```

```
end mouseStillDown
** BKGND #3, FIELD #1: Description ************************************
on mouseup
 -- this handler turns show field "description" off and
 -- show the card picture with associated buttons on.
 show card picture
 set the highlight of background btn "VOICE" to true
 set visible of field "Description" to false
 repeat with i=1 to the number of buttons
  show button i
 end repeat
 show background button "sorry"
end mouseup
** BKGND #3, FIELD #3: BUTTONS ************************************
on mouseup
 GLOBAL CARDID
 put CARDID into SECOND ITEM OF line¬
 (clickline()) of field "DATA"
 SET VISIBLE OF FIELD "BUTTONS" TO FALSE
 show card picture
 REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
  set visible of button COUNT to true
 END REPEAT
end mouseup
** BKGND #3, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #3, FIELD #8: listname ************************************
--GRABS THE PERSON THE USER HAS SELECTED AND GETS THE PERSON'S RATE
AND
--THEN PUTS IT INTO THE NEXT OPEN WATCH SECTION
on mouseUp
 global watchname,i,m,nextin
 set lockText of bkgnd field "listname" to false
 put line clickline() of bkgnd field "listname" into realNAME
 set lockText of bkgnd field "listname" to true
 add 1 to m
 --BRANCHES INTO SELECTION FOR WATCHES
 put "point-" & m into pointer
 put "point-" & m-1 into pointerlast
 --THIS TOGGLES THE ARROW BUTTONS
 if m < 5
 then
  show button pointer
  hide button pointerlast
 else
  hide button pointerlast
```

```
  end if
  lock screen
  put "5wsta-" & m into tempfield
  put watchname into line i of bkgnd field tempfield
  push card
  go to stack enlisted
  find  whole realname of bkgnd field "ename"
  put background field "erate" into temprate
  pop card
  put "5wname-" & m into namefield
  put "5wrate-" & m into ratefield
  put realname into line i of bkgnd field namefield
  put temprate into line i of bkgnd field ratefield
  unlock screen
  --COMPLETED ALL FOUR SECTIONS AND SEES IF ANOTHER WATCHSTATION IS
REQUIRED
  if m=5
  then
    answer "Add another watch station?" with "OK" or "Cancel"
    if it = "OK"
    then
      put 0 into m
      add 1 to i
      hide bkgnd field listname
      hide button "choose a name!"
      push card
      go to card id 2862
      exit mouseUP
      unlock screen
    else
      --ROUTINE SAVES THE DOCUMENT IN STACK SHIP AND PUTS THE CARD ID
      --INTO THE WORKCENTER'S INBOX
      put 0 into m
      put 0 into i
      hide bkgnd field listname
      hide button "choose a name!"
      answer "Would you like to save this document?" with "OK" or "Cancel"
      if it is "OK"
      then
        lock screen
        put the ID of this card into nextin
        go to card id 3258
        send mouseup to bkgnd field "infield"
        unlock screen
        exit mouseUP
      end if
    end if
    unlock screen
  end if
  unlock screen
end mouseUp
```

```
** BKGND #3, BUTTON #1: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #3, BUTTON #2: New Button ********************************
on mouseUp
  global nextin
  answer "Would you like to save this document?" with "OK" or "Cancel"
  if it is "OK"
  then
    lock screen
    put the ID of this card into nextin
    go prev
    send mouseup to bkgnd field "infield"
    TALK "RETURN TO WORKCENTER", 160,115
    unlock screen
    exit mouseUP
  end if
end mouseUp
** BKGND #3, BUTTON #3: wup ***************************************
--sets scrolling fields to Leave History station position for UP
on mouseStillDown
  lock screen
  get scroll of field "indfrom"- textHeight of field "indfrom"
  if it <0 then get 0
  set scroll of field "indto" to it
  set scroll of field "ltype" to it
  set scroll of field "numdays" to it
  set scroll of field "lbal" to it
  set scroll of field "indfrom" to it
  unlock screen
end mouseStillDown
** BKGND #3, BUTTON #4: wdown *************************************
--sets scrolling fields to Leave history position for Down
on mouseStillDown
  if the number of lines of field "indfrom" <2
  then exit mouseStillDown
  lock screen
  get scroll of field "indfrom"+ textHeight of field "indfrom"
  set scroll of field "indto" to it
  set scroll of field "ltype" to it
  set scroll of field "numdays" to it
  set scroll of field "lbal" to it
  set scroll of field "indfrom" to it
  unlock screen
end mouseStillDown
```

```
** BKGND #4, FIELD #1: Description ************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #4, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #4, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- HE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
--THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #4, BUTTON #1: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
    TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #4, BUTTON #2: New Button ************************************
--ASKS TO SAVE DOCUMENT IN INBOX OR DELETES IT
on mouseUp
  global nextin
  answer "Would you like to save this document?" with "OK" or "DELETE"
  if it is "OK"
  then
    lock screen
    put the ID of this card into nextin
    go prev
    send mouseup to bkgnd field "infield"
    TALK "RETURN TO WORKCENTER", 160,115
```

```
  unlock screen
  exit mouseUP
 end if
 IF IT IS "DELETE"
 THEN
  lock screen
  DOmenu "delete card"
  go prev
  unlock screen
 end if
end mouseUp
** BKGND #4, BUTTON #3: workstatustra ************************************
--BUTTON SEARCHES STACK ENLISTED FOR WORKCENTER PERSONNEL AND
RETRIEVES
--TRAINING INFO ON PERSONNNEL DEFICIENT AND STATISTICS
on mouseUp
 global tempwork
 put 0 into z
 put 0 into w
 put 0 into testcard
 put 0 into tempid
 put the date into todaydate
 --lock screen
 push card
 go to stack enlisted
 --SORTS PERSONNEL FOR SEARCH
 sort descending by field "workcenter"
 put 0 into counter
 repeat forever
  --MAKES SURE PERSON IS IN WORKCENTER
  get bkgnd field workcenter
  if it is empty
  then
   exit repeat
  end if
  put bkgnd field workcenter into testwork
  if testwork is tempwork
  then
   add 1 to w
   put 1 into gotone
   put bkgnd field "ename" into tempname
   put tempname into checkname
   --START EVALUATING TRAINING RECORD
   repeat with y =1 to the number of lines in bkgnd field watch
    get line y of bkgnd field "date qual"
    if it is empty
    then
     --IF NO QUAL DATE THEN COULD BE DEFICIENT
     put line y of bkgnd field "est compl date" into testdate
     convert testdate to seconds
     convert todaydate to seconds
```

```
        --TEST FOR DEFICIENCY
        if todaydate >= testdate
        then
          if gotone = 1
          then
            add 1 to z
          end if
          --IF DEFICIENT STORE INFO ON PERSON
          put line y of bkgnd field "watch" into tempwatch
          put line y of bkgnd field "prog" into tempprog
          get the number of card
          put it into tempid
          pop card
          add  1 to counter
          convert testdate to short date
          ----PUT INFO ON STATUS CARD
          put tempname into line counter of bkgnd field "traper"
          put testdate into line counter of bkgnd field "tracompdate"
          put tempprog into line counter of bkgnd field "traprog"
          put tempwatch into line counter of bkgnd field "trawatch"
          push card
          --GO BACK AND GET ANOTHER PERSON
          go to stack enlisted
          go to card tempid
          put 0 into gotone
        end if
      end if
    end repeat
    -- go next
  end if
  go next
 end repeat
 go to stack ship
 go to card worktra
 --PUT FINAL INFO ON CARD AND COMPUTE STATISTICS
 put tempwork into bkgnd field trawork
 put w into bkgnd field totpers
 put z into bkgnd field totpersdef
 put round((z/w)*100) into bkgnd field percpersdef
 unlock screen
end mouseUp
** BKGND #4, BUTTON #4: wdown ***********************************
--sets scrolling fields to Watch station position for Down
on mouseStillDown
 if the number of lines of field "traper" <2
 then exit mouseStillDown
 lock screen
 get scroll of field "traper"+ textHeight of field "traper"
 set scroll of field "trawatch" to it
 set scroll of field "tracompdate" to it
 set scroll of field "traprog" to it
```

```
  set scroll of field "traper" to it
  unlock screen
end mouseStillDown
** BKGND #4, BUTTON #5: wup ************************************
--sets scrolling fields to trainin status station position for UP
on mouseStillDown
  lock screen
  get scroll of field "traper"- textHeight of field "traper"
  if it <0 then get 0
  set scroll of field "trawatch" to it
  set scroll of field "tracompdate" to it
  set scroll of field "traprog" to it
  set scroll of field "traper" to it
  unlock screen
end mouseStillDowN
** BKGND #5, FIELD #1: Description *************************************
on mouseup
  -- this handler turns show field "description" off and
  -- show the card picture with associated buttons on.
  show card picture
  set the highlight of background btn "VOICE" to true
  set visible of field "Description" to false
  repeat with i=1 to the number of buttons
    show button i
  end repeat
  show background button "sorry"
end mouseup
** BKGND #5, FIELD #3: BUTTONS ************************************
on mouseup
  GLOBAL CARDID
  put CARDID into SECOND ITEM OF line¬
  (clickline()) of field "DATA"
  SET VISIBLE OF FIELD "BUTTONS" TO FALSE
  show card picture
  REPEAT WITH COUNT = 1 TO NUMBER OF CARD BUTTONS
    set visible of button COUNT to true
  END REPEAT
end mouseup
** BKGND #5, FIELD #4: data ************************************
-- EACH LINE NUMBER OF THE FIELD CONTAINS TWO DATA ITEMS WHICH
-- CORRESPOND TO A BUTTON NUMBER. I.E. LINE 1 CONTAINS DATA FOR BUTTON
12
-- THE FIRST ITEM IS THE CARD ID OF THE CHILD OF THIS ITEM
-- THE SECOND ITEM IS THE CARD ID OF THE CARD IN THE COSAL STACK WHICH
-- CORRESPONDS TO THIS ITEM
** BKGND #5, BUTTON #1: VOICE ************************************
on mousedown
  -- toggles voice on/off
  if the hilite of me then
    TALK "VOICE ON", 160, 115
  else
```

```
   TALK "VOICE OFF", 160, 115
  end if
end mousedown
** BKGND #5, BUTTON #2: New Button ************************************
on mouseUp
  global nextin
  answer "Would you like to save this document?" with "OK" or "Cancel"
  if it is "OK"
  then
    lock screen
    put the ID of this card into nextin
    go prev
    send mouseup to bkgnd field "infield"
    TALK "RETURN TO WORKCENTER", 160,115
    unlock screen
    exit mouseUP
  end if
end mouseUp
** BKGND #5, BUTTON #3: DRAWSTATUS *************************************
on mouseUp
  --INITIALIZE BAR GRAPH COORDINATES
  put 80 into begboxH
  put 97 into begboxV
  put 113 into endboxV
  put 1 into y
  put 1 into z
  put the date into todaydate
  put 13 into colomum
  ask "Please enter SSN of the individual!" with "111-11-1111"
  if it is "cancel" or it is empty
  then
    exit mouseUp
  end if
  lock screen
  push card
  go to stack enlisted
  find whole it of field ssn
  if the result is empty
  then
    get the number of card
    put it into tempid
    put background field "Ename" into tempname
    repeat with x = 1 to the number of lines of bkgnd field "watch"
      put 340 into endboxH
      put "watch-" & y into fwatch
      put "compl-" & y into fcompl
      put "def-" & y into fdef
      get line x of bkgnd field "watch"
      if it is empty
      then
        pop card
```

```
      unlock screen
      answer "There are no watches in the record!!"
      exit mouseUp
    end if
    put line x of background field "watch" into tempwatch
    put line x of bkgnd field "date qual" into tempqual
    if tempqual is  not empty
    then
      pop card
      put tempwatch into line z of bkgnd field watchcomp
      add 1 to z
      add 1 to x
      push card
      go to stack enlisted
      go to card tempid
      next repeat
    end if
    put line x of bkgnd field "est compl date" into tempcdate
    put line x of bkgnd field "prog" into tempprog
    pop card
    put tempwatch into bkgnd field fwatch
    put tempcdate into bkgnd field fcompl
    convert tempcdate to seconds
    convert todaydate to seconds
    if todaydate >= tempcdate
    then
      put "***" into card field fdef
    end if
    choose rect tool
    set pattern to colornum
    set the filled to true
    put round((2.125*tempprog) +100) into endboxH
    drag from begboxH,begboxV to endboxH,endboxV
    choose browse tool
    set the filled to false
    --INCREMENT THE BAR GRAPH POSITION
    add 1 to y
    add 1 to x
    add 1 to colornum
    add 16 to begboxV
    add 16 to endboxV
    push card
    go to stack enlisted
    go to card tempid
  end repeat
  pop card
  put tempname into bkgnd field "traename"
  unlock screen
 end if
end mouseUp
** CARD #1, BUTTON #1: New Button ************************************
```

```
on mouseUp
 put 0 into fytotbal
 --COMPUTES THE FISCAL YEAR DATE
 put "10/01/" into tempfy
 put the date into ddd
 convert ddd to dateitems
 put  (item 1 of ddd-1) into it
 put tempfy & it into fydate
 --FIND OUT WHO IS GOING ON LEAVE
 TALK "WHO IS requesting leave?", 160, 115
 ask " SSN of the person wanting leave?"with "222-22-2222"
 if it is "Cancel" or it is empty then
  exit mouseUp
 else
  lock screen
  push card
  go to stack enlisted
  --FIND THE PERSON'S RECORD
  sort descending by bkgnd field "ssn"
  find whole it of field ssn
  if the result is  empty then
   --GET INFO ON PAGE 1 OF RECORD
   put background field "Ename" into tempname
   put background field "ssn" into tempssn
   put background field "division" into tempdiv
   put background field "paygrade" into temppaygrade
   put background field "dutysec" into tempduty
   --GET INFO ON PAGE 2 OF RECORD
   go to line 1 of field linklist
   --CALCULATES LEAVE BALANCE TO DATE
   put last line of background field "lbal" into templbal
   put last line of background field "lto" into temptotbal
   convert temptotbal to seconds
   put the date into todaydate
   convert todaydate to seconds
   put abs(temptotbal-todaydate)/(60*60*24) into update
   put ROUND(((update/30)*2.5) + templbal) into totbaltodate
   --TOTAL UP LEAVE USED TO DATE
   repeat with y = 1 to the number of lines of bkgnd field lto
    put line y of bkgnd field lto into testlto
    convert testlto to seconds
    convert fydate to seconds
    if testlto >= fydate
    then
     put line y of bkgnd field ldays into totbal
     put (totbal + fytotbal) into fytotbal
    end if
   end repeat
   --GET INFO ON SHIP
   go to stack personnel
   go to card "shipdefault"
```

```
put card field "dutyphone" into tempdphone
put card field "shipname" into tempshipname
--*********************************************
-- FOLLOWING INFO MUST BE ENTERED BY THE USER
--*********************************************
pop card
answer"What is the type of the leave?"with "Regular" or¬
"Emergency" or "Other"
if it is "Other"
then
  ask "Please type a short reason for Report?" with Other:
  put it into temptype
end if
put it into temptype
ask "When is the date of the request?" with the date
put it into tempdate
ask "Are you outside of the US presently?"with "Yes"
if it is "Yes"
then
  answer"Are you leaving your PERMDUTYSTA area?"with "Yes" or "No"
  put it into templperm
  answer"Are you taking leave INCONUS?"with "Yes" or "No"
  put it into tempinconus
else
  put "No" into templperm
  put "No" into tempinconus
end if
unlock screen
ask "Mode of Travel: AIr,Car,Bus,Train?" with Air
put it into tempmode
ASK "How many days are requested?"
put it into tempreq
ask "When would you like to start leave?"with the date
put it into templfrom
ask "When would you like to end leave?"with the date
put it into templend
ask "What is your leave phone?" with "(111)111-1111"
put it into templphone
lock screen
--*********************************************
--*********************************************
-- PUTS INFO IN FIELDS ON FORM
--*********************************************
put tempname into background field "lname"
put tempssn into background field "lssn"
put temppaygrade into background field "lpayg"
put tempdate into background field "lreq"
put tempshipname into background field "lship"
put tempdiv into background field "ldiv"
put tempduty into background field "lduty"
put tempdphone into background field "ldphone"
```

```
    put temptype into background field "ltype"
    put templperm into background field "lperm"
    put tempinconus into background field "linconus"
    put tempmode into background field "lmode"
    put tempreq into background field "ldayreq"
    put templfrom into background field "lfrom"
    put templend into background field "lto"
    put templphone into background field "lphone"
    put totbaltodate into background field "numdays"
    put the date into background field "asofdate"
    put fytotbal into background field "lused"
   end if
  end if
  unlock screen
  TALK "PLEASE FILL IN EMPTY BLOCKS OR CLICK ON SPACE", 160, 115
end mouseUp
** CARD #1, BUTTON #2: New Button ************************************
on mouseUp
  delete line 1 of bkgnd field "lyes1"
  delete line 1 of bkgnd field "lno1"
  Answer "Do you recommend the leave?"with "YES" or "NO"
  if it is "YES"
  then
    put "X" into bkgnd field lyes1
  end if
  if it is "NO"
  then
    put "X" into bkgnd field lno1
  end if
end mouseUp
** CARD #1, BUTTON #3: DISAPPROVED ************************************
on mouseUp
  if showname of button "DISAPPROVED" is false
  then
    set showname of button "DISAPPROVED" to true
    set the style of button "DISAPPROVED" to opaque
  else
    set showname of button "DISAPPROVED" to false
    set the style of button "DISAPPROVED" to transparent
  end if
end mouseUp
** CARD #1, BUTTON #4: New Button ************************************
on mouseUp
  delete line 1 of bkgnd field "lyes2"
  delete line 1 of bkgnd field "lno2"
  Answer "Do you recommend the leave?"with "YES" or "NO"
  if it is "YES"
  then
    put "X" into bkgnd field lyes2
  end if
  if it is "NO"
```

```
 then
  put "X" into bkgnd field lno2
 end if
end mouseUp
** CARD #1, BUTTON #5: New Button ************************************
on mouseUp
 delete line 1 of bkgnd field "lyes3"
 delete line 1 of bkgnd field "lno3"
 Answer "Do you recommend the leave?"with "YES" or "NO"
 if it is "YES"
 then
  put "X" into bkgnd field lyes3
 end if
 if it is "NO"
 then
  put "X" into bkgnd field lno3
 end if
end mouseUp
** CARD #1, BUTTON #6: New Button ************************************
on mouseUp
 delete line 1 of bkgnd field "lration"
 Answer "What is your ration status?"with "COMRATS" or "EDF" or "N/A"
 if it is "COMRATS"
 then
  put "COMRATS" into bkgnd field lration
 end if
 if it is "EDF"
 then
  ask"What is your meal pass#?"
  put "Meal Pass #"& it into bkgnd field lration
 end if
 if it is "N/A"
 then
  put "N/A" into bkgnd field lration
 end if
end mouseUP
** CARD #3, BUTTON #1: New Button ************************************
on mouseUp
 global tempname
 ask "Please enter SSN of the individual!" with "222-22-2222"
 if it is "cancel" or it is empty
 then
  exit mouseUp
 end if
 put it into tempssn
 ask "Which quarter is the leave in?" with "1 1/89"
 if it is "cancel" or it is empty
 then
  exit mouseUp
 end if
 put it into tempname
```

```
lock screen
push card
go to stack enlisted
find whole tempssn of field ssn
if the result is empty
then
 put background field "Ename" into tempename
 get line 1 of bkgnd field linklist
 go to it
 get the number of card
 put it into tempid
 repeat with x = 1 to the number of lines of bkgnd field "lfrom"
  get line x of bkgnd field "lfrom"
  if it is empty
  then
   pop card
   unlock screen
   answer "There is no leave record record!!"
   exit mouseUp
  end if
  put line x of background field "lfrom" into templfrom
  put line x of bkgnd field "lto" into templto
  put line x of bkgnd field "ltype" into templtype
  put line x of bkgnd field "ldays" into templdays
  put line x of bkgnd field "lbal" into templbal
  pop card
  put templfrom into line x of background field "indfrom"
  put templto into line x of background field "indto"
  put templtype into line x of background field "ltype"
  put templdays into line x of background field "numdays"
  put templbal into line x of background field "lbal"
  push card
  go to stack enlisted
  go to card tempid
 end repeat
 put 1 into z
 get line 2 of bkgnd field linklist
 go to it
 put it into tempid
 repeat with y = 1 to the number of lines of bkgnd field "watch"
  put line y of bkgnd field "date qual" into tempqual
  if tempqual is  not empty
  then
   put line y of bkgnd field "watch" into tempwatch
   pop card
   put tempwatch into line z of bkgnd field qwatch
   add 1 to z
   push card
   go to stack enlisted
   go to card tempid
  end if
```

```
    end repeat
    pop card
    put tempename into bkgnd field "indlname"
    get the number of card
    put it into tempidofcard
    go to stack sched1
    go to card draw
    send mouseUp to card button "draw"
    choose select tool
    drag from 19,15 to 479,97
    Domenu "Copy Picture"
    choose browse tool
    go to stack ship
    go to card tempidofcard
    Domenu "Paste Picture"
    drag from 230,67 to 230,235
    choose browse tool
    put empty into tempname
    unlock screen
  end if
end mouseUp
```

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Thesis
H52333 Hess
c.1 An analysis, design, implementation of the administrative and personnel functional areas of ARGOS.